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SOUTHEASTERN BIOLOGY



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ASB 68TH ANNUAL MEETING APRIL 18-21, 2007

The University of South Carolina
Columbia, South Carolina

See Page 469 and Consult Website
<http://www.asb.appstate.edu/>



John Herr, Local Arrangements Chair,
standing near the entrance to the University.

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Print Editor..... James D. Caponetti, Division of Biology, University of Tennessee, Knoxville, TN 37996-0830; (865) 974-6841; FAX (865) 974-4057; jcaponet@utk.edu.
Associate Editor Debbie Moore, Department of Natural Sciences, Troy University, P.O. Box 8368, Dothan, AL 36304-8368; (334) 983-6556, ext. 250; FAX (334) 983-6322; dsmoore@troy.edu.
Web Editor..... Dwayne A. Wise, Dept. of Biological Sciences, P. O. Drawer GY, Mississippi State University, Mississippi State, MS 39762; (662) 325-7579; FAX (662) 325-7939; daw1@ra.msstate.edu.
Business Manager..... Tim Atkinson, Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215; (336) 538-6224; tim.atkinson@carolina.com.
News Editor Ricky Fiorillo, Department of Biology, University of Louisiana at Monroe, Monroe, LA 71209; (318) 342-1797; FAX (318) 342-3312; fiorillo@ulm.edu.
Book Review Editor Debbie Moore, Department of Natural Sciences, Troy University, P.O. Box 8368, Dothan, AL 36304-8368; (334) 983-6556, ext. 250; FAX (334) 983-6322; dsmoore@troy.edu.
Meetings Coordinator. Scott Jewell, P.O. Box 1088, Mebane, NC 27302; Office (336) 421-0034; FAX (336) 421-3425; Cell (336) 213-7373; a2zconvention@yahoo.com.

ASB OFFICERS

President Kim Marie Tolson, Dept. of Biology, University of Louisiana, Monroe, LA 71209-0520; (318) 342-1805; FAX (318) 342-3312; tolson@ulm.edu.
President-elect W. Michael Dennis, Breedlove, Dennis and Associates, Inc., 330 W. Canton Ave., Winter Park, FL 32789; (407) 677-1882; FAX (407) 657-7008; (800) 304-1882; mike@bda-inc.com.
Vice-President Bonnie Kelley, Dept. of Biology, University of North Carolina, Pembroke, NC 28372-1510; (910) 521-6419; kelley@uncp.edu.
Past President..... Dwayne A. Wise, Dept. of Biological Sciences, P. O. Drawer GY, Mississippi State University, Mississippi State, MS 39762; (662) 325-7579; FAX (662) 325-7939; daw1@ra.msstate.edu.
Secretary Debbie Moore, Department of Natural Sciences, Troy University, P.O. Box 8368, Dothan, AL 36304-8368; (334) 983-6556, ext. 250; FAX (334) 983-6322; dsmoore@troy.edu.
Treasurer..... Tim Atkinson, Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215; (336) 538-6224; tim.atkinson@carolina.com.
Membership Officer Deborah Atkinson, Office of Continuing Education, School of Public Health, University of North Carolina, CB#8165, 400 Roberson Street, Chapel Hill, NC 27599-8165; (919) 843-6892; FAX (919) 966-5692; datkinso@email.unc.edu.
Archivist..... John Herr, Dept. of Biological Sciences, University of South Carolina, Columbia, SC 29208; (803) 777-8110; FAX (803) 777-4002; herr@biol.sc.edu.

Executive Committee Members-at-Large

2007: Elaine J. Davis, Dept. of Natural Sciences, Bowie State University, 14000 Jericho Park Rd., Bowie, MD 20715; (301) 860-3876; edavis@bowiestate.edu.
Scott Franklin, Dept. of Biology, University of Memphis, Ellington Hall, 3700 Walker Ave., Memphis, TN 38152; (901) 678-5539; FAX (901) 678-4746; sfrankli@memphis.edu.
2008: Jennifer J. Davis, Dept. of Biology, Shorter College, Rome, GA 30161; (706) 233-7292; jdavis@shorter.edu.
Dennis C. Haney, Dept. of Biology, Furman University, Greenville, SC 29613-0418; (864) 294-2050; FAX (864) 294-2058; dennis.haney@furman.edu.
2009: Donald H. Roush, Department of Biology, University of North Alabama, P. O. Box 5181, Florence, AL 35632; (256) 765-4435; FAX (256) 765-4430; ahrouse@una.edu.
Robert Wayne Van Devender, Department of Biology, Appalachian State University, 572 Rivers Street, Boone, NC 28608; (828) 262-6907; (828) 262-2127; vandevenderr@appstate.edu.

PURPOSE

The purpose of this association shall be to promote the advancement of biology as a science by encouraging research, the imparting of knowledge, the application of knowledge to the solution of biological problems, and the preservation of biological resources. The ASB has representation in Section G Committee of the AAAS. Varying types of membership are available to individuals and institutions. See inside back cover.

TIME AND PLACE OF FUTURE MEETINGS

2007 April 18-21: Hosted by the University of South Carolina, Columbia, South Carolina.
2008 April 16-19: Co-hosted by Furman University, Greenville, South Carolina, and Wofford College, Spartanburg, South Carolina.



The University of South Carolina, Columbia

is proud to host the

**68th Annual Meeting of the
2007 Association of Southeastern Biologists
April 18 – 21, 2007, Columbia, SC
Columbia Metropolitan Convention Center**

Preliminary Meeting Information

This four-day event brings together approximately 800 biologists from across the southeastern United States. The meeting features a distinguished plenary speaker, special symposia, field trips, oral and poster presentations, workshops, networking and social events, and more.

The Annual Meeting provides you with the exclusive opportunity to showcase your products and/or services to this large and important audience of faculty, students, researchers, conservation workers, military and government personnel, and business professionals with a common interest in biological issues. Interests are diverse, and range from genetics and molecular biology, to physiology and population biology, to community and ecosystem ecology and systematics.

About ASB: The Association of Southeastern Biologists (ASB) was established in 1937 by biologists concerned with the quality of biological research in the southeastern United States. Today, ASB is the largest regional biology association in the country, and is committed to the advancement of biology as a science by the promotion of science education, research, and the application of scientific knowledge to human problems.

ASB Web Site: Many thanks to Dr Terry Richardson, University of North Alabama, for serving many years as the ASB Web Editor and ASB Secretary. Many thanks to Dr Dwayne Wise, Mississippi State University for launching ASB's new web site. Please visit our new and exciting web site: www.asb.appstate.edu. Many new features have been added, register on-line for our Annual Meeting, view photos, inquire about career opportunities and more.

Silent Auction: Once again, ASB will have a Silent Auction in the Exhibit Hall. 100% of all proceeds will benefit student travel to the Annual Meeting. Last year's Silent Auction was a big success. Let's plan on another successful event to assist students with their travel expenses to the meeting in Columbia.

The University of South Carolina, Columbia

The University of South Carolina will host the 68th annual meeting of the ASB in celebration of the association's 70th year. ASB did not hold an annual meeting in two successive years during World War II. Most events of the meeting will take place in the new Columbia Metropolitan Convention Center located in the Vista section of the city close to a variety of fine restaurants, fast-food establishments, coffee houses, pubs, and specialty shops. The traditional Thursday evening social occasion, which evolved from the "Smoker Social" of the early years when smoking was cool, will be held in the patio/pool area of the Strom Thurmond Wellness Center and will feature award-winning barbeque accompanied by traditional side dishes and beverages.

Chartered in 1801 as South Carolina College with its first students, all nine of them, arriving in 1805, the University of South Carolina has grown through times of good fortune and tragedy into a large research university of 28,000 students. Undergraduate and graduate programs are offered in the College of Arts and Sciences and also in the professional colleges of Engineering, Business Administration, Education, Nursing, Medicine, and Pharmacy. Regional campuses of the university are located in Aiken, Beaufort, Lancaster, Salkehatchie, Spartanburg, Sumter, and Union.

BIOLOGICAL SCIENCE RESEARCH AT USC

Lewis H. Bowman: Small RNAs including small interfering RNAs (siRNAs) and microRNAs (miRNAs) have emerged as important regulators of plant defense and development. Future research focuses on the mechanisms controlling their biogenesis and function.

Erin Connolly: Research focuses on elucidating molecular mechanisms that control iron uptake and homeostasis in plants specifically, to uncover the genes and gene products that control iron uptake and distribution to the various tissues, cells and organelles. Understanding of the mechanisms for iron uptake and homeostasis in plants should facilitate the development of plants with enhanced levels of bioavailable iron.

Bert Ely: Research focuses on population genetics. Current projects include: 1) the African American DNA Roots project to analyze diversity among West African ethnic groups; 2) an analysis of genetic diversity among genes thought to be involved in certain types of breast cancer; 3) determination of the genetic relatedness of populations of striped bass and black sea bass. For more information: www.biol.sc.edu/~elygen.

Michael R. Felder: Research that addresses the pathology of alcohol metabolism makes use of transgenic and knockout mouse models. Studies focus on the regulation of alcohol dehydrogenase expression by distal elements.

Robert Feller: Research documents and quantifies the impact of predator-prey interactions of epibenthic shrimp and crabs that feed on the benthos in estuarine systems. Field and laboratory manipulative techniques and immunochemical methods are used to characterize trophic interactions. These studies are important for understanding whether prey communities are strongly or weakly influenced by top-down controls.

Travis Glenn: Research at USC and UGA Savannah River Ecology Laboratory is focused on areas of Molecular Ecology, Environmental Genomics, Reptilian Genomics, Conservation Genetics, and Genotoxicology. Study organisms range from alligators to bacteria and include fish, *Peromyscus*, red pandas and Whooping cranes. For more information please see: <http://baddna.srel.edu/>.

Brian Helmuth: The effects of global climate change on coastal ecosystems are examined by field studies, mathematical modeling, and remote sensing techniques used to forecast damage to intertidal and coral reef ecosystems. To work with resource managers and conservation biologists to "triage" the effects of global warming is an ongoing goal. <http://www.biol.sc.edu/~helmuthlab>.

Beth Krizek: Flowering plants display a remarkable diversity in the morphologies of their flowers. We are studying the molecular basis of several floral features (such as organ size and organ fusion) that contribute to morphological diversity. We use molecular, genetic, and biochemical approaches with the model plant *Arabidopsis thaliana* to characterize the pathways regulating these aspects of flower development

Robert Lawther: Dr. Lawther's research interest is the regulation of gene expression. Currently, he is collaborating with Dr Michael Felder in an analysis of the expression of alcohol dehydrogenase in mice.

David Lincoln: Studies focus on the role of chemically mediated interactions in terrestrial and marine communities where chemical signals and behavioral responses form a common structure across diverse communities and taxa. Current research emphasizes the coevolved symbiosis between odorous plant defenses and associative learning in parasitoid wasps.

James Morris: Research in my lab centers on the ecology of saltmarshes with special emphasis on their biogeochemistry, the physiological ecology of their plants, and the effects of sea level rise on the ecology of salt marshes.

Tim Mousseau: Conducts research concerning the evolution of adaptations to changing environments. Of particular interest are the evolution of life histories, reproductive behavior and adaptive maternal effects in insects and birds. Recent studies address the evolutionary and ecological consequences of prolonged exposure to low-level radioactive contaminants on birds and arthropods inhabiting the Chernobyl region of Ukraine.

John Nelson: Curator of the A. C. Moore Herbarium. His research involves the distribution of plants in South Carolina and the Southeast. Recent field work includes studies of vegetation within blackwater creeks of the sandhills, and

botanical inventory of Sandy Island (Georgetown County SC). His taxonomic studies center on the genus *Stachys* (Lamiaceae).

Rekha Patel: Interferons have antiviral and antiproliferative activities, thus making them attractive for use in cancer therapy. Research focuses on understanding how interferon induced protein kinase PKR regulates cell proliferation and programmed cell death and involves study of protein-protein interactions mainly to elucidate PKR regulation by activators and inhibitors.

James L. Pinckney: Research in marine ecology with special emphases on primary producers, the regulation of microalgal community structure by biotic and abiotic mechanisms, and the effects of extreme environments on microalgal physiology. Current projects include the impact of Hurricane Katrina on phytoplankton in Lake Pontchartrain and the effects of agricultural herbicides on estuarine phytoplankton assemblages. <http://www.biol.sc.edu/~jpinckney/>.

J. M. Quattro: Research reflects a broad interest in the mechanisms of genetic evolution at several fundamental levels. Genetics studies of marine fishes and mollusks, address the processes that shape the underlying structure of marine populations and use sequence analyses of nuclear and mitochondrial DNA genes as markers of population differentiation. Interest centers on spatial and temporal stability of gene frequencies.

Tammi Richardson: Work in my lab focuses on interactions between environmental factors (light, nutrients, and temperature) and phytoplankton growth and taxonomic composition in aquatic ecosystems.

David Reisman: Cis- and trans-acting factors affecting expression of the p53 tumor suppressor gene; analysis of oncogenic activities of mutant p53 genes. The role of mutant p53 in promoting cancer metastasis.

Roger Sawyer: β keratin multi-gene family analysis from chicken genome data and sequences from other bird species should clarify regulation during appendage morphogenesis. A cluster of β keratin genes on chromosome 27 in chicken indicates many duplication events in this family. The phylogeny of β keratin sequences suggests repeated gene duplications/ deletions over the evolutionary history of birds.

Deanna Smith: Biophysics, biochemistry, and cell biology in this laboratory are applied to studies of cell division and movement especially in a developing embryo. Of special interest is a microtubule motor protein and the dynein regulatory protein, Lis1, linked to a brain disorder in humans. Studies focus on Lis1 and dynein in axon/dendrite, organelle transport in the mature brain and their role in changes in dynamic cellular processes.

Stephen E. Stancyk: Research in the broad area of marine invertebrate reproductive ecology and life histories. Studies include effects of sublethal tissue loss on the life history and reproduction of ophiuroid echinoderms (brittlestars) and of pollutants (zinc, cadmium) on the regeneration process. Other studies are directed to starfish mass mortalities in South Carolina and predation interactions between starfish and brittlestars.

Johannes Stratmann: When plants are wounded by insects, they fight their attackers by inducing sophisticated defense responses. Studies on the molecular

mechanisms underlying these defense responses in tomato plants employ state-of-the-art techniques in molecular biology, biochemistry, and cell biology. See: <http://www.biol.sc.edu/faculty/stratmann.html>.

Vicki Vance: RNA silencing is an anti-viral defense pathway in plants that acts via small regulatory RNAs (siRNAs). Certain plant viruses encode proteins that suppress the RNA silencing pathway. Work is focused on a viral suppressor (HC-Pro) with emphasis on the molecular mechanism by which this protein blocks silencing and on the role of plant proteins in the process.

Alan S. Waldman: Research is focused on the mechanisms that maintain genome stability. Several genetic diseases, e.g., cancer, involve a breakdown of such mechanisms and are associated with abnormal chromosomal rearrangements. A molecular biological approach using mutant mammalian cell lines and modern genetic tools, is expected to provide insight into the proteins and pathways that help repair DNA damage and preserve genetic integrity.

Columbia, South Carolina

Columbia, the capital and largest city in South Carolina, has a population of 121,395 with an estimated 689,878 in the metropolitan area. The city was named for Christopher Columbus, and the name is a poetic one for "America". Columbia was chosen to be the site of South Carolina's new state capital in 1786, chartered as a town in 1805 and as a city in 1854. It was the second planned city in the United States (Savannah was the first), yet, it did not have a single paved street until Main Street was surfaced in 1908. It was recently one of 30 communities named "America's Most Livable Communities", an award given by the Washington-based non-profit "Partners for Livable Communities" to honor communities that are developing themselves in the creative economy.

The Columbia Metropolitan Convention Center

The Columbia Metropolitan Convention Center is a 142,500 square foot meeting/exhibit facility that has a 17,200 square foot exhibit hall. Inside, visitors will move through expansive concourses and prefunction spaces. Daylight from the glass skylights and exterior walls enhance the rich interior palette drawn from the community's historic and natural environment. The two-story facility is conveniently located in a new upscale shopping/entertainment district known as *The Congaree Vista*. The Vista offers something for everyone in its array of restaurants, bars, and entertainment. From fine dining to more casual fare, the Vista features both diverse cuisine and a great atmosphere. The whole scene comes alive at night with theatre and live music.

ASB-2007 Tentative Schedule

DAY/TIME	EVENT	LOCATION
Wednesday, April 18		
9:00 am-4:00 pm	Exhibitor Move-In	Exhibit Hall
12 noon-2 pm	Exhibitor Pizza Party (Exhibitors Only)	Exhibit Hall
8:00 am-8:00 pm	Registration Open	Convention Center
8:00 am-8:00 pm	Cyber Café Open	Exhibit Hall
2:00-6:00 pm	ASB Executive Committee Meeting	Meeting Room
2:00-6:00 pm	SABS Council Meeting	Meeting Room
2:00-5:00 pm	Symposium I	Meeting Room
7:30-9:00 pm	ASB Plenary Session	Ballroom
9:00-10:30 pm	Welcome Reception	Exhibit Hall
	Light hors d'oeuvres. Exhibits Open	
9:00 -10:30 pm	Exhibits Open	Exhibit Hall
Thursday, April 19		
7:00 am-4:00 pm	Power Point Preview & Tech. Check	Small Room
8:00 am-5:00 pm	Exhibits Open	Exhibit Hall
8:00 am-5:00 pm	Registration Open	Convention Center
9 am-12:00 Noon	Guest/Spouse Tours	Columbia
7:00-8:30 am	ASB Past Presidents' Breakfast	Meeting Room
8:30-10:00 am	Paper Presentations (50)	9 Meeting Rooms
8:30-10:00 am	Exhibitor's Workshop	Meeting Room
10:00-10:30 am	Break: Visit Exhibits & Posters	Exhibit Hall
10:30-12:00 noon	Paper Presentations	9 Meeting Rooms
10:30-12:00 noon	Exhibitor's Workshop	Meeting Room
8:00-9:00 am	ASB Posters I Setup	Exhibit Hall
10:00-11:00 am	ASB Posters I Presentations	Exhibit Hall
	Presenters must be present	
12:00 noon-1:30 pm	Lunch (Individuals & Organizations)	
1:30-3:00 pm	Paper Presentations	9 Meeting Rooms
1:30-3:00 pm	Exhibitor's Workshop	Meeting Room
3:00-3:30 pm	Break: Visit Exhibits & Posters	Exhibit Hall
3:30-5:30 pm	Paper Presentations	9 Meeting Rooms
3:30-5:30 pm	Exhibitor's Workshop	Meeting Room
2:00-5:00 pm	Symposium II	Meeting Room
2:30-3:30 pm	SHC Executive Board Meeting	Meeting Room
3:30-4:30 pm	The SHC Meeting	Meeting Room
1:30-4:00 pm	ASB Posters I on Exhibit	Exhibit Hall
4:00-5:00 pm	ASB Posters I Removed	Exhibit Hall
5:30-7:00 pm	On your own in the Vista	
6:00-11:00 pm	Thursday Night Social : The Antepenultimate Party (Shuttle Buses to/from ASB Hotels)	Strom Thurmond Wellness Center

Friday, April 20

7:00 am-4:00 pm	Power Point Preview and Tech. Check	Meeting Room
8:00 am-1:00 pm	Exhibits Open	Exhibit Hall
1:00-4:00 pm	Exhibitor Move-Out	Exhibit Hall
9:00 am-12:00 Noon	Guests Tour	Columbia
7:00-8:30 am	SABS/BSA Breakfast	Meeting Room
7:00-8:45 am	βββ Poster Setup	Meeting Room
9:00-10:00 am	βββ Business Meeting	Meeting Room
10:00-11:30 am	βββ Poster Presentations	Meeting Room
8:30-10:00 am	Paper Presentations	9 Meeting Rooms
8:30-10:00 am	Exhibitor’s Workshop	Meeting Room
7:00-8:30 am	ASB Posters II Setup	Exhibit Hall
10:00-11:00 am	ASB Posters II Presentations	Exhibit Hall
	Presenters must be present	
10:00-10:30 am	Break: Visit Exhibits & Posters	Exhibit Hall
10:30-11:30 am	ASB Business Meeting	Ballroom
11:30 am-12:30 pm	Paper Presentations	9 Meeting Rooms
12:30-2:00 pm	Lunch (Individuals & Organizations)	
2:00-5:30 pm	Paper Presentations	9 Meeting Rooms
2:00-5:00 pm	Symposium III (50-125)	Meeting Room
3:00-4:00 pm	ASB Posters II on Exhibit	Exhibit Hall
4:00-5:00 pm	ASB Posters II Removed	Exhibit Hall
6:00-7:00 pm	Friday Night Social:	
	The Penultimate Party	Convention Center
7:00-10:00 pm	Awards’ Banquet:The Ultimate Party	Ballroom
	Presentation and Announcement of Awards	

Saturday, April 21

7:30-11:30 am	ASB Executive Committee	
	Breakfast Meeting	The Inn at USC
9:00 am- 1:30 pm	Field Trips TBA	

Travel to Columbia

Columbia is one of eleven cities in the United States through which pass three interstate highway, viz., I-77, I-20, and I-26. I-77 North connects with I-40 and I-81. I-20 West connects with I-85 in Atlanta. I-20 East connects with I-95 in Florence. I-26 West connects with I-385 to Greenville and continues to I-40 in Asheville. I-26 East connects with I-95 and continues to Charleston.

From Charlotte (Points North):

Take I -77 South to Columbia to Exit 18 onto SC 277. Follow Hwy 277 into the city where it becomes Bull Street and dead ends at Pendleton Street. Turn right on Pendleton, travel 6 blocks to Lincoln Street, turn left and then right into the Convention Center parking lot.

From Nashville/Knoxville (Points West):

Take I-40 East to I-26 East in Asheville. Follow I-26 East to Columbia where two left lanes enter the city as I-126. Stay in the right two lanes where I-126 becomes

Elmwood Ave. Turn right on Assembly Street and travel 10 blocks (count on right side) to Pendleton Street. Turn right on Pendleton; go 2 blocks to Lincoln Street; turn left and then right into the Convention Center parking lot.

From Atlanta (Points West):

Take I-20 East to Columbia to Exit 64, I-26 East to enter the city (See *"From Nashville/Knoxville"* above).

From Charleston or I-95 (Points South):

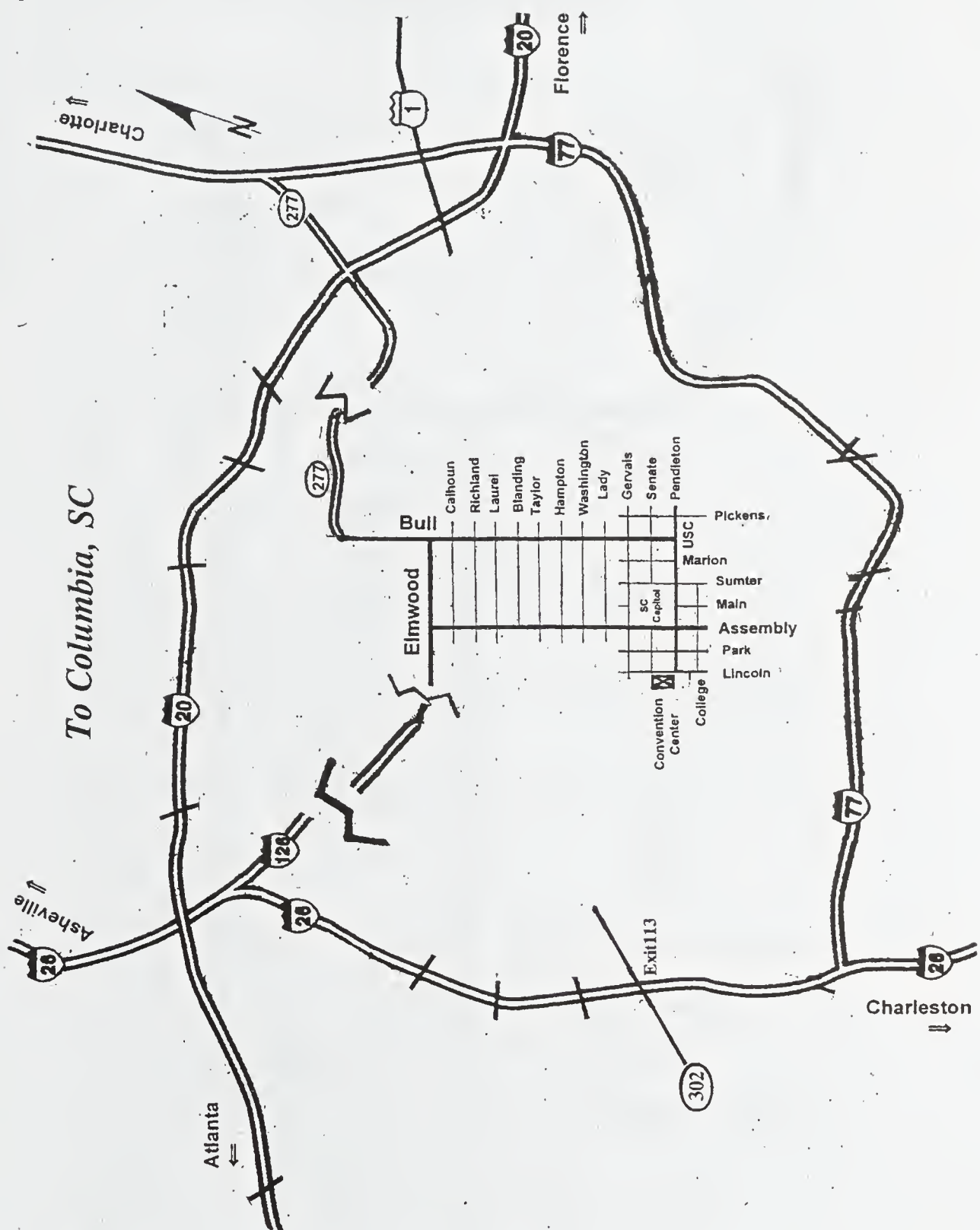
Take I-26 West to Exit 108, I-126 East to enter the city. (Follow *"From Nashville/Knoxville"* above). Alternative: From I-26 West, take Exit 113, Route 302 (Edmund Road) toward city; left on Route 321 and soon right on Knox Abbott Drive which across the river is Blossom Street. Turn left on Lincoln Street, pass College Street, and turn left into the Convention Center parking lot.

From Florence or I-95 (Points North):

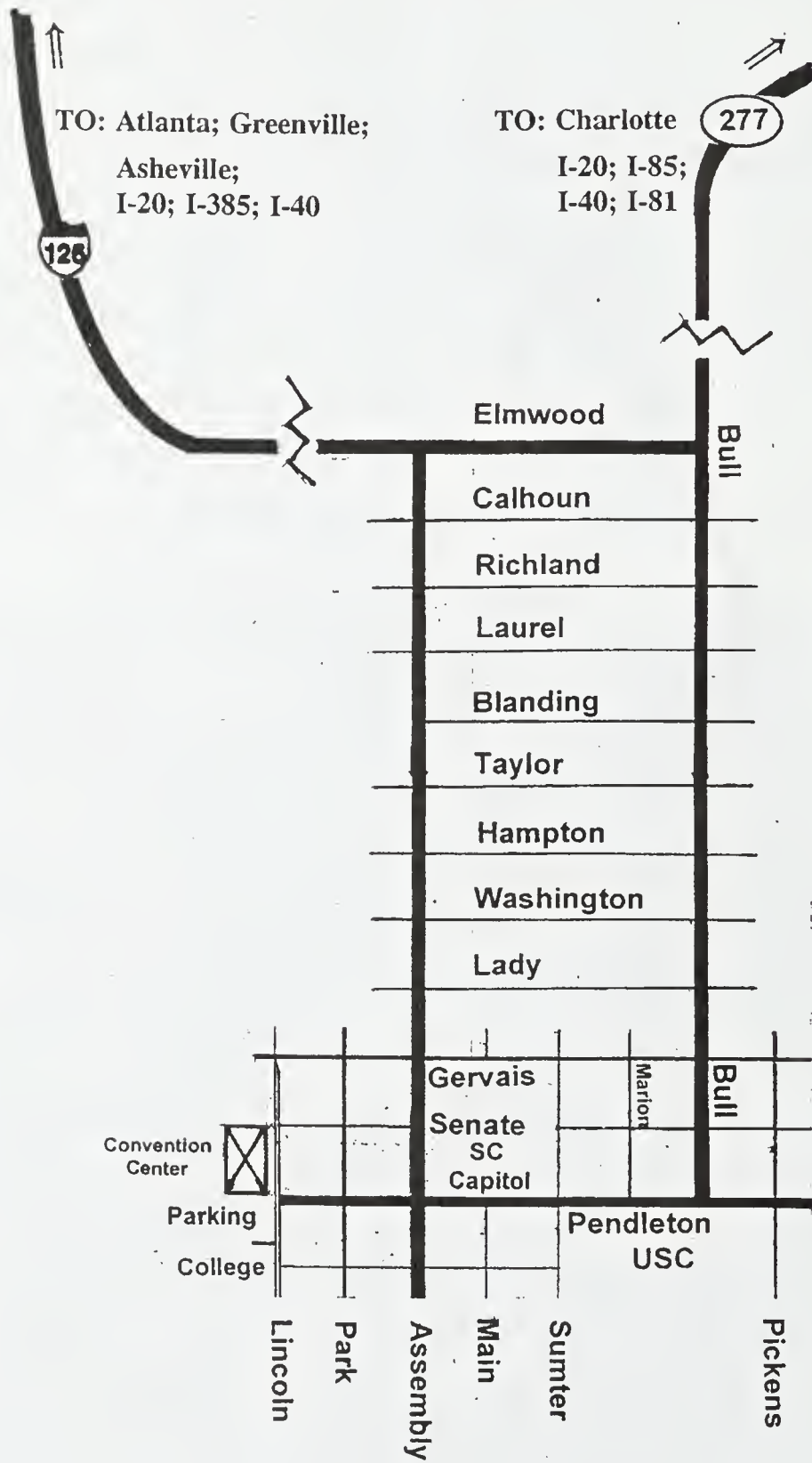
Take I-20 West to Exit 73 onto SC 277. Follow 277 into the city (Follow *"From Charlotte"* above). ☞



The microbiology research laboratory of Charles R. Lovell, Chair, Department of Biological Sciences, University of South Carolina.

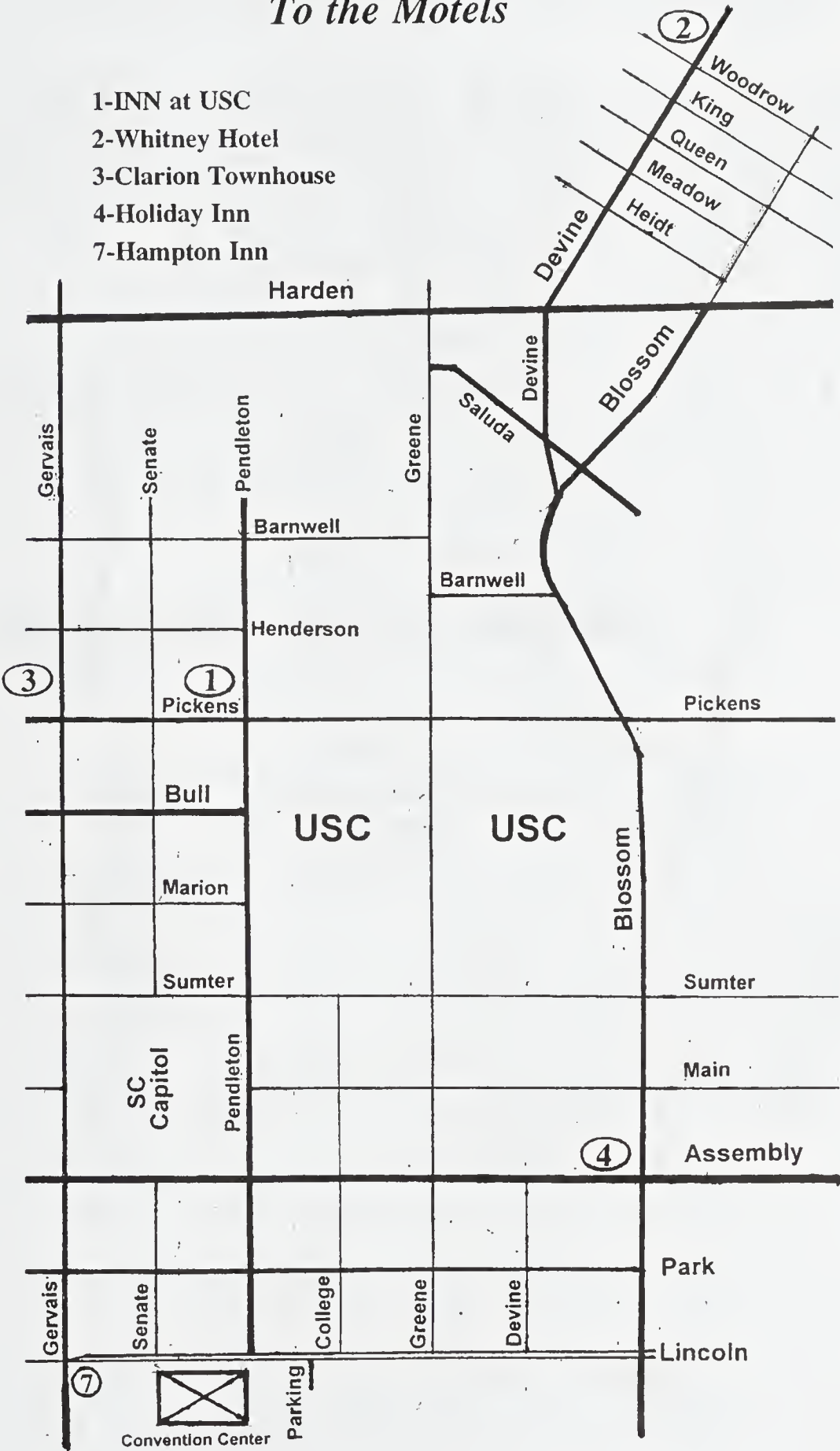


To Columbia Convention Center

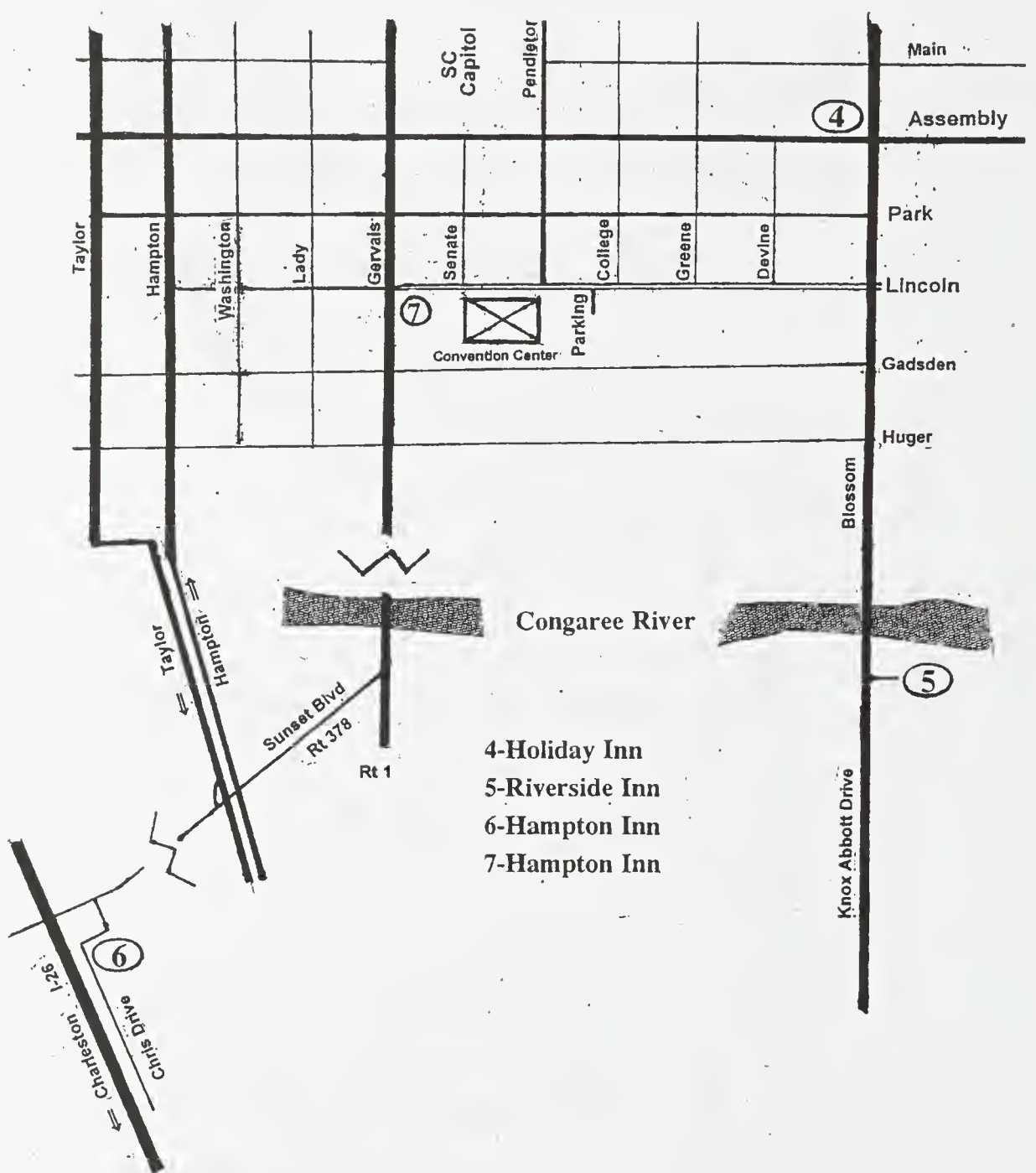


To the Motels

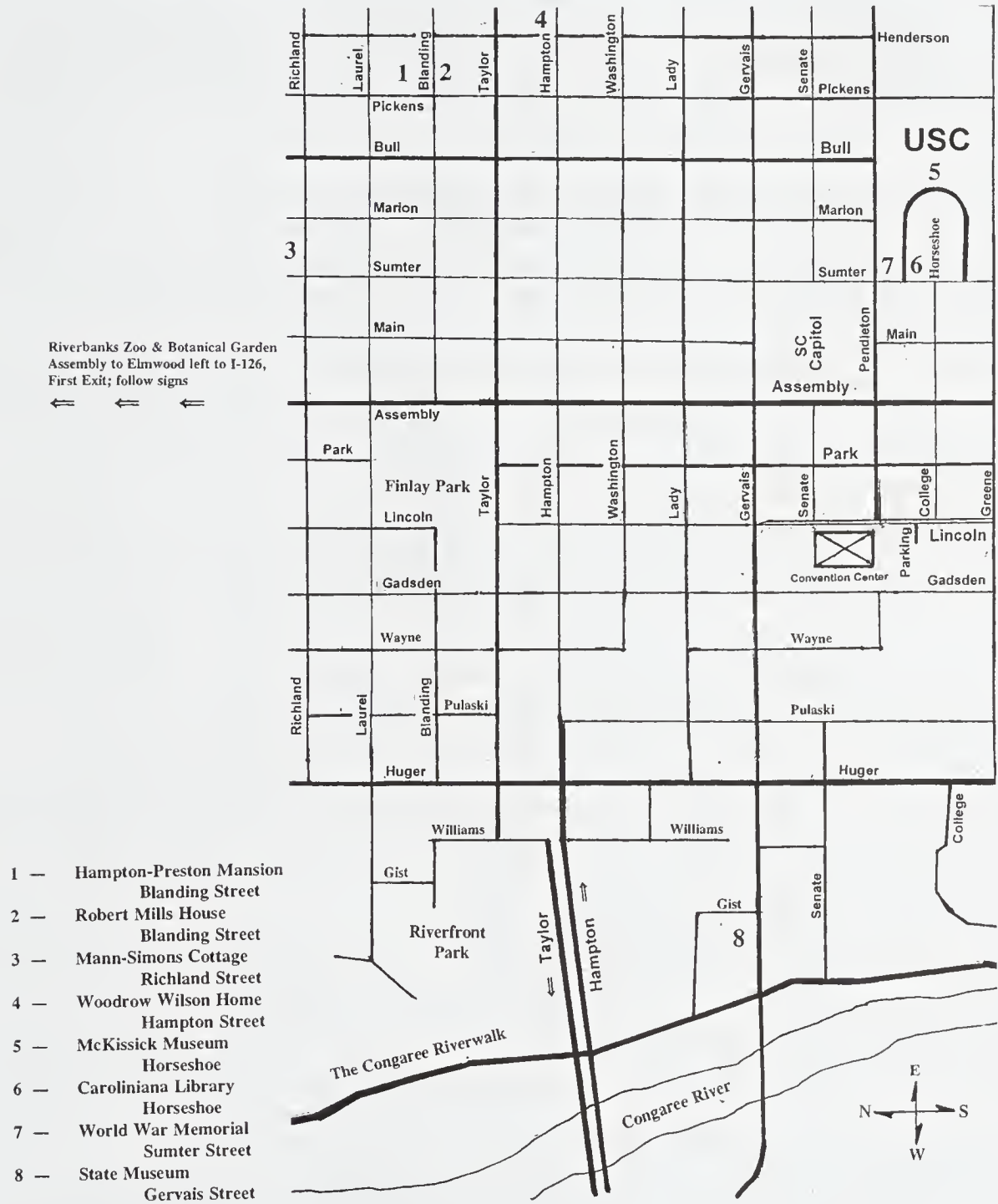
- 1-INN at USC
- 2-Whitney Hotel
- 3-Clarion Townhouse
- 4-Holiday Inn
- 7-Hampton Inn



To the Motels



Columbia: Historical Sites and Memorable Sights



ASB 2007 FIELD TRIPS

For its geographic area, South Carolina is rich in natural habitats and species diversity, and thus presents many excellent opportunities for biological research. The western third of the Palmetto State comprises Blue Ridge and piedmont ecoregions. The lower two-thirds of the state is dominated by its coastal plain, and related fall-line sandhills. A series of field trips has been planned for the exploration of the coastal plain and sandhills.

Trips are approximately a half day in length and will involve caravans. Car pooling, where possible, will be encouraged. All trips will begin from the Columbia Convention Center. "One way" participation, that is, without a return to Columbia, is OK. Lunch will be on your own; bring whatever food and water you will need.

The middle of April in South Carolina is a beautiful time, as spring literally erupts across the state. Nevertheless, we often have cool snaps and sudden rainy weather in the spring, and storms are possible. Participants are requested to dress appropriately (including selecting proper footwear), and to be aware that ALL the field trips involve potential wet or muddy places. Spring is not particular bad in the mosquito and yellow-fly department (that's during the summer!), but insect repellent may be useful. The best philosophy, of course, is to be a good boy scout or girl scout, and to BE PREPARED. Consider also that we are home to several trillion fire ant nests, which can make a field trip very unpleasant. For information, contact field trip coordinator John Nelson.

1. **Congaree Bluffs Heritage Preserve**, Calhoun County SC. 9:00am-1:00pm. Trip leader: Ann Darr, SCDNR. One of the newest members of South Carolina's heritage sites, situated on the south side of the Congaree River, featuring 200' riverine bluffs, and a spectacular view of the Congaree River floodplain.

2. **Flat Creek Heritage Preserve**, Lancaster County SC. 9:00am-1:00pm. Trip leader: Kathy Boyle, SCDNR. Long known as one of the best developed granitic flatrock ecosystems in the Southeast, featuring healthy populations of the endangered poolsprite (*Amphianthus pusillus*). Associated forests, underlain by a massive diabase dike, feature calciphilic vegetation.

3. **Congaree National Park**, Richland County. 9:00am-1:00pm. L. L. Gaddy, Terra incognita, Inc. A complex of various bottomland ecosystems, along with mesic bluff communities; the largest contiguous tract of virgin forest remaining in South Carolina, and home to a number of national champion trees. Nearly 800 species of vascular plants reside here.

4. **Stevens Creek Heritage Preserve**, McCormick County SC. 9:00am-1:00pm. Trip leader: Rudy Mancke, USC. One of the Southeast's most diverse botanical sites, featuring a large number of rare species and a rich spring floral display. This site is considered a relict pleistocene habitat, whose biological affinities are largely northern.

5. **Birding field trip:** Destination, time TBA. Trip leader: John Cely. Characteristic avian fauna of the SC midlands. Special attention will be paid to the many spring migrants of this area.

6. **Herpetological field trip,** Hampton and Jasper Counties SC, SCDNR properties. 9:00am-until? Trip leaders: Stephen Bennett, SCDNR, Julian Harrison, College of Charleston. Reptiles and amphibians, and their habitats, from a variety of low-country sites.

7. **Sandhill excursion:** Peachtree Rock Heritage Preserve, Shealy's Pond Heritage Preserve. 9:00-until? Trip leaders: Bert Pittman, SCDNR, Wayne Grooms. The first Nature Conservancy Preserve in SC, now a Heritage Preserve. Unusual geologic formations support a variety of habitats and rare species. You'll see the highest natural waterfall between Columbia and Charleston, and an excellent example of a blackwater sandhill stream, complete with an Atlantic white-cedar bog.

Symposia

1. **A Symposium in Honor of Albert E. Radford (1918-2006): Contributions to Southeastern botany, floristics, ecology, and conservation.**

Subject areas:

1. Taxonomic work in the Southeastern US; naming of new taxa.
2. Biodiversity inventory and conservation in the Southeastern United States.
3. Ecosystematics/community diversity/soil and rock type control of vegetation.
4. Floristics/keys/ID aids for the Southeastern flora.
5. Southeastern Biogeography.

Introduction:

Alan S. Weakley (North Carolina Botanical Garden, University of North Carolina at Chapel Hill). "Contributions of Al Radford to Southeastern floristics and conservation"

Systematics:

Katherine Mathews (Western Carolina University). "Systematics and biogeography of *Sabatia* (Gentianaceae)"

L.L. 'Chick' Gaddy (terra incognita). "Homage to K. K. Mackenzie and Albert Radford: Why are there so many sedges?"

Jim Allison (Georgia Natural Heritage Program, retired). "New taxa in the *Hypericum denticulatum* complex, including *H. radfordiorum*"

Bruce Sorrie & Richard LeBlond (North Carolina Natural Heritage Program and UNC Herbarium). "Taxonomy of southeastern needle-leaved *Hypericum*"

Floristics:

Alan S. Weakley (North Carolina Botanical Garden, University of North Carolina at Chapel Hill). "A new regional flora for the Southeastern United States"

J. Christopher Ludwig (Virginia Division of Natural Heritage and Flora of Virginia Project). "A new flora for the Old Dominion: a progress report"

Bioinformatics and Biogeography:

Zack Murrell (Appalachian State University). "The role of cyberinfrastructure in conservation and biogeography in the Southeast"

Robert K. Peet and Alan S. Weakley (UNC Herbarium). "A new online tool for accessing distributional data for the Carolinas"

Donna M.E. Ware (College of William and Mary). "Coastal Plain disjuncts in the mountains of Virginia and North Carolina"

Inventory and Conservation:

Misty Franklin (North Carolina Natural Heritage Program). "The status of natural area inventory in North Carolina"

Patrick McMillan (Clemson University). "Al Radford's influence on natural area conservation in South Carolina"

2. Ecological Impacts and Coastal Ecosystem Resiliency Following Hurricane Katrina.

In the wake of Hurricane Katrina, the University of South Carolina's Office for Research and Health Sciences awarded nearly \$400,000 in grants to fund 18 research projects on the environmental and societal impacts of the massive storm as part of the university's CRISIS (Coastal Resiliency Information Systems Initiative for the Southeast) initiative. The grants enabled USC researchers and their collaborators at universities in the Gulf Coast, including Louisiana State University, Tulane, the University of Southern Mississippi, and the University of South Alabama, to investigate the disaster, capture perishable data necessary to understand aspects of coastal resiliency, and examine the recovery of natural processes and ecosystems and the societal changes that occur with the relocation of residents and the rebuilding of communities. This symposium will include presentations from five of these projects that span a range of interests and topics, but all focus on the ecological effects of the hurricane and touch on the implications for ecosystem recovery.

Introduction to Session: John Kupfer (10 minutes)**Speakers and Titles:**

Assessing Regional Impacts at the Population-Genetic Level in Estuarine Animals Impacted by Hurricane Katrina. Joseph Quattro, Dept. of Biological Sciences and Marine Science Program.

Hurricane Katrina Impacts and Responses in a Pristine Coastal Salt Marsh Estuary. Sam Walker, Dwayne Porter and Madilyn Fletcher. Dept. of Environmental Health Sciences, Arnold School of Public Health; Marine Science Program; Dept. of Biological Sciences and School of the Environment.

Untreated Urban Effluent Effects on Phytoplankton Community Structure and Function in Lake Pontchartrain, Louisiana. James Pinckney, Meghan Jelloe, Michael Coggins and Danielle Johnson. Dept. of Biological Sciences and Marine Science Program.

Patterns and Controls of Forest Damage Following Hurricane Katrina in DeSoto National Forest, Mississippi. John Kupfer, Dept. of Geography, USC Hazards Vulnerability Research Institute.

Geospatial Integration of Biophysical and Social Indicators for Examining Community and Ecosystem Vulnerability and Resilience. Susan Cutter and Jerry Mitchell, Dept. of Geography, USC Hazards Vulnerability Research Institute.

Panel Discussion and Questions:

3. Status of the herbarium cyberinfrastructure in the Southeast

SERNEC (Southeast Regional Network of Expertise and Collections) is a five year project funded by the National Science Foundation to develop a network of herbaria in the Southeast. This network is designed to encourage cooperation in databasing the collections by the year 2020, while at the same time developing herbaria as community centers for learning about plants. The curators from the 150 herbaria in the Southeast will meet on Saturday after the ASB meeting for a workshop on “Research, Collaborations and Funding”. The symposium will be a “kick-off” for that workshop, providing time for representatives to present the projects and ongoing efforts from each state. This will allow others to see the novel projects being developed and will provide a foundation for discussions on Saturday.

Speakers:

Zack Murrell	Introduction and update on SERNEC
Austin Mast	Gulf Coast eFlora Project
Curtis Hansen	Alabama Herbarium Network
Johnnie Gentry	Arkansas Herbarium Network
Andrea Weeks	Virginia Herbarium and Library Network
Gerald Long	South Carolina Herbarium Consortium
Michelle Zjhra	State of the Georgia Herbaria
Dayle Saar	State of Kentucky Herbaria

Tom Sasek	State of Louisiana Herbaria
Lucile McCook	State of Mississippi Herbaria
Joey Shaw	State of Tennessee Herbaria
TBA	State of Florida Herbaria
Alexander Krings	State of North Carolina Herbaria
Roland Roberts	State of Maryland and Delaware Herbaria
TBA	State of West Virginia Herbaria

Commercial Workshops

All commercial workshops will be presented by exhibitors for all registered attendees. The fee for each workshop will be \$10 each. You may register to attend one or more workshops during the Annual ASB Meeting. Topics range from the non-formaldehyde preservative used in dissection to the latest electron microscopy instruments. Plan to attend one of this year's workshops during the Annual Meeting and learn about the latest tips from the experts.

Social Events

Wednesday night mixer: The event will be in the exhibitor hall immediately following the Plenary Session. Sign up for this FREE event when you register for the meeting. Kick off our Annual Meeting with a Big Bang! Heavy Hors d'oeuvres and a cash bar will be available.

Thursday night social: ASB has a historic reputation for hosting an exciting and fun-filled Thursday Night Social. And this year is no different!!!!

We are bringing the Beach to Columbia!!! This year's event will be held at the brand new Strom Thurmond Wellness & Fitness Center on the beautiful campus of the University of South Carolina. This world-class facility has over 192,000 square feet of indoor space, outdoor pool and sand volleyball courts.

Since 1971, The Second Nature Band has been a regional favorite for Country Clubs, College Campuses, Reunions and Convention Groups. They will provide an evening of the most popular Beach & Dance Music and are a top choice for Festivals and Beach Shows. The band's repertoire contains exceptional variety to excite any gathering. Bring your sliding dancing shoes.....you will want to learn "The Shag" that was invented in South Carolina.

The outdoor pool will be open (life-guards will be on duty) and sand volleyball courts will also be available for everyone to enjoy!

Bring your swimsuit, your appetite, your dancing shoes and yourself to this sure-to-be-fun night of enjoyment!!!

ASB will provide continuous transportation to/from the event-no driving required!



**Outdoor Pool Area
Strom Thurmond Wellness & Fitness Center**

Friday night Awards Banquet: This year's event will be a change from the past in many ways. Students will enjoy a drastically reduced price of \$15 per person. This is a 40% reduction from last year's ticket price. Vegetarian meals will be available upon request. Following dinner, award presentations will be made. The Past President's speech will NOT be presented in Columbia. Other entertainment will be provided for your enjoyment. (A reminder: those competing for awards must be present at the banquet in order to receive the award).

Activities for Guests

There are a plethora of interesting places to visit not too distant from the Columbia Convention Center. The short list includes: Riverbanks Zoo and Botanical Garden; State Museum, Confederate Relic Room and Museum; McKissick Museum and USC Visitor Center; Columbia Riverfront Park and Historic Canal; and the Caroliniana Library, the first free-standing college library in the United States. Among many other attractions are several homes open to the public: *Hampton-Preston Mansion and Gardens*, Built in 1818, this restored antebellum mansion is furnished with Hampton and Preston family pieces; *Mann-Simons Cottage*, Celia Mann, an enslaved Charleston midwife who acquired her freedom and walked to Columbia, lived here from the 1840s until 1867; *Robert Mills House & Park*, This restored mansion was built in 1823 and designed by South Carolina's most famous architect, Robert Mills; and the *Woodrow Wilson Family Home*, Woodrow Wilson, the nation's 28th president, spent four years of his youth in Columbia. He and his family lived in this home built by his parents in 1872.

Registration Information

We encourage everyone to register early and save money. ASB will offer 3 options for registration: 1) Online @ www.asb.appstate.edu, 2) US Mail sent to Leads, Etc and 3) Fax directly to Leads, Etc. All 3 options will be available on-line beginning Nov. 15, 2006. You will be able to register for all ticketed events.

Registration forms will be available on-line on Nov 15, 2006 and in the Jan issue of Southeastern Biology.

Conference Badges

You will receive your meeting badges when you arrive in Columbia. Simply proceed to the Registration Area in the Columbia Convention Center to receive your badge. **YOU MUST WEAR YOUR BADGE TO ALL FUNCTIONS, INCLUDING SOCIAL EVENTS!**

Hotel Information

ASB has secured the following hotels at a discounted rate for exhibitors and attendees. Please remember to ask for the special ASB discounted rate when making reservations. The following hotels are providing additional services to accommodate ASB. Please make your reservations soon. The Inn at USC is our Headquarters Hotel has been secured for Exhibitors and Regular Members. The Riverside Inn and the Holiday Inn City Centre has been designated for student housing. Please make your reservations as soon as possible. Please visit their web sites for directions to their property. **THE LAST DAY TO RESERVE A ROOM AT THE DISCOUNTED RATE IS 3/01/07.**

2007 ASB Group Discount Hotels

<u>Hotel</u>	<u>Rates & Rating</u>	<u>Notes of Interest</u>
<u>Headquarters Hotel</u> The Inn at USC 1619 Pendleton Street Columbia, SC 29201 7 Blocks to Convention Center www.innatuse.com 803/779-7779	S/D/T/Q*: \$116.10 5 Star	Made to Order Breakfast Included At least one occupant must be 21 or older University Affiliated, Very nice property
The Clarion 1615 Gervais Street Columbia, SC 29201 8 Blocks to Convention Center www.clariontownhouse.com 803/771-8711	S/D/T/Q: \$85.95 4 Star	Very Nice Restaurant
Hampton Inn- West Columbia/I-26 1094 Chris Drive Columbia, SC 29201 4.6 miles to Convention Center www.hampton-inn.com/hi/columbia-airport 803/791-8940	S/D/T/Q: \$89.00 4 Star	Extended Continental Breakfast Included

The Whitney
700 Woodrow Street
Columbia, SC 29205
21 Blocks to Convention Center
www.whitneyhotel.com
803/791-8940

1 BRS**: \$109.00
2 BRS: \$129.00
4 Star

Very Spacious,
Converted Condos
Continental Breakfast,
Best Value

Student Housing
Riverside Inn
111 Knox Abbott Drive
Cayce, SC 29033
1.2 miles to Convention Center
www.riversideinncolumbia.com
803/939-4688

S/D: \$57.00
T/Q: \$67.00
2 Star

½ Block from Riverwalk

Student Housing
Holiday Inn-City Centre
630 Assembly Street
Columbia, SC 29201
5 Blocks to Convention Center
www.holidayinnatusc.com
803/799-7800

S/D: \$67.00
3 Star

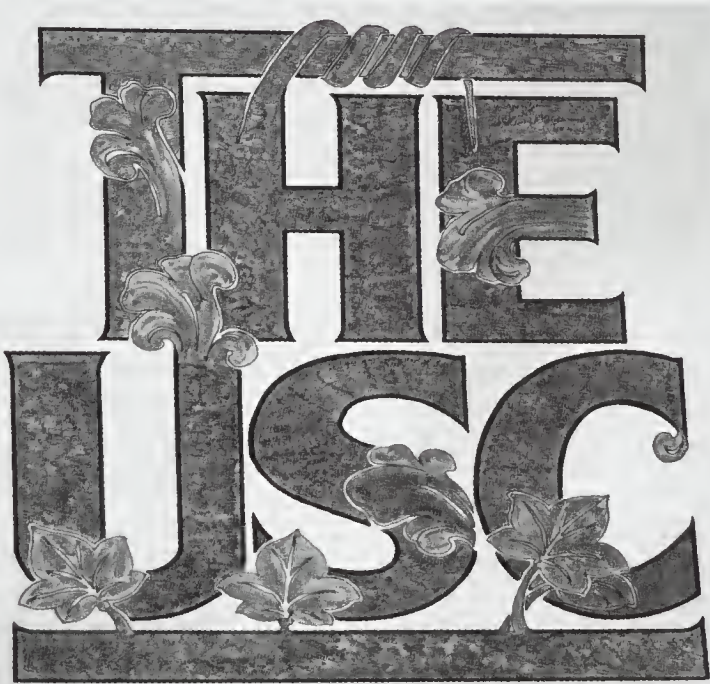
Continental Breakfast
Convenient to all
functions

Hampton Inn-
Downtown Historic District
822 Gervais Street
Columbia, SC 29201
Adjacent to Convention Center
www.HamptonInnColumbia.com

S/D: \$149.00
5 Star

Extended Continental
Breakfast Included
Does Not Provide ASB
Group Rate
Convenient to the Vista
and Nightlife

* Single, Double, Triple, Quad. ** Bedroom Suite



Sign designed by John
Nelson, Curator, A.C. Moore
Herbarium, University of
South Carolina.

**Local Committee Assignments
For The 68th Annual Meeting
University of South Carolina
Columbia, SC**

<i>Local Arrangements Chair:</i>	John Herr herr@biol.sc.edu	(803) 777-8110
<i>Program Committee:</i>	David Lincoln lincoln@biol.sc.edu Rob Raguso raguso@biol.sc.edu	(803) 777-7306 (803) 777-7074
<i>Commercial Exhibits and Workshops:</i>	Dick Zingmark and MC* zingmark@biol.sc.edu Jerry Hilbish hilbish@biol.sc.edu	(803) 777-4873 (803) 777-6629
<i>Field Trips:</i>	John Nelson nelson@biol.sc.edu	(803) 777-8196
<i>Social Events:</i>	David Rembert and MC* rembert@biol.sc.edu	(803) 777-0096
<i>Transportation/Parking:</i>	Robert Feller feller@biol.sc.edu	(803) 777-3937
<i>On-Site Registration:</i>	Gerald Cowley	(803) 772-0539
<i>Volunteer Coordinator:</i>	Dick Vogt vogt@biol.sc.edu	(803) 777-8101
<i>Tri-Beta Coordinators:</i>	David Reisman reisman@biol.sc.edu Loran Knapp knapp@biol.sc.edu	(803) 777-8108 (803) 777-2557
<i>Audiovisual Coordinator:</i>	Clint Cook and MC* cook@biol.sc.edu	(803) 777-3975
<i>Promotions:</i>	Tim Mousseau and MC* mousseau@biol.sc.edu Richard Showman showman@biol.sc.edu	(803) 777-8047 (803) 777-2457
<i>Hotel Accommodations:</i>	Scott Jewell (the MC)*	
<i>*Meeting Coordinator (MC):</i>	Scott Jewell a2zconvention@yahoo.com	(336) 421-0034

**AFFILIATE SOCIETIES MEETING WITH ASB
APRIL 18-21, 2006**

The following affiliate societies, except the **SE Division of ASIH, Southeastern Fishes Council, Southeastern Microscopy Society, and Southeastern Society of Parasitologists**, will be in attendance at the 2007 Annual Meeting. We anticipate an excellent diversity of paper and poster presentations. The societies and their contacts are listed below.

**American Society of Ichthyologists and Herpetologists
Southeastern Division**

Dr. Gregory L. Fulling
Senior Fisheries Biologist/
Geo-Marine, Inc.
550 East 15th Street
Plano, TX 75074
(972) 423-5480; Fax: (972) 422-2736
e-mail: gfulling@geo-marine.com

**Beta Beta Beta
Southeastern District I**

Dr. Virginia Martin
Queens College of Charlotte
1900 Selwyn Avenue
Charlotte, NC 28274
(704) 337-2261
e-mail: martinv@rex.queens.edu

**Beta Beta Beta
Southeastern District II**

Dr. Donald H. Roush
Dept. of Biology, Box 5181
University of North Alabama
Florence, AL 35632-0001
(256) 765-4435
e-mail: dhroush@una.edu

**Botanical Society of America
Southeastern Division**

Dr. Lytton John Musselman
Mary Payne Hogan Professor of
Botany and Chair
Department of Biological Sciences
110 Mills Godwin Building/45th St
Old Dominion University
Norfolk, VA 23529-0266
(757) 683 3595; Fax: (757) 683 5283

e-mail: lmusselm@odu.edu
<http://web.odu.edu/lmusselman>

**Ecological Society of America
Southeastern Chapter**

Dr. Frank S. Gilliam
Department of Biological Sciences
Marshall University
Huntington, WV 25755-2510
Phone: (304) 696-3636
FAX: (304) 696-3243
E-mail: gilliam@marshall.edu

Society of Herbarium Curators

Dr. Zack Murrell
Department of Biology
Appalachian State University
Boone, NC 28608
(828) 262-2674 Fax:
e-mail: murrellze@appstate.edu

**Society of Wetland Scientists
South Atlantic Chapter**

Gregory B. Noe
U.S. Geological Survey
430 National Center
Reston, VA 20192
(703) 648-5826; Fax: (703) 648-5484
e-mail: gnoe@usas.gov

Southeastern Fishes Council

Dr. Noel M. Burkhead
USGS/FISC Geological Survey Center
for Aquatic Resource Studies
7920 NW 71st Street
Gainesville, FL 32653
(352) 378-8181; Fax: (352) 378-4956
e-mail: noel_burkhead@usgs.gov

Southeastern Microscopy Society

Dr. Judy King, President, SEMS
Department of Pathology
University of South Alabama
2451 Fillingim Street
Mobile, AL 3617-2293
(251) 471-7779; Fax: (251) 470-5817
e-mail: jking@usouthal.edu

**Southeastern Society of
Parasitologists**

Dr. Charles Faulkner
Dept. of Comparative Medicine
College of Veterinary Medicine
University of Tennessee
2407 River Drive

Knoxville, TN 37996-4543
(865) 974-5718; Fax: (865) 974-6232
e-mail: ctfaulkner@utk.edu

**Southern Appalachian Botanical
Society**

Dr. Howard Neufeld
Department of Biology
Appalachian State University
Boone, NC 28608
(828) 262-2683; Fax: 828-262-2127
e-mail: neufeldhs@appstate.edu

Sponsorships/Industry Partners

A wide selection of special sponsorships will be available to our Industry Partners. Please view the sponsorships on our web site: www.asb.appstate.edu. For additional information you may call or e-mail our Meeting Planner, Scott Jewell, office: 336 421-0034, cell 336 213-7373, A2ZConvention@yahoo.com.

Advertising

The ASB is now offering advertising space in one or more of our quarterly publications, Southeastern Biology. Advertisers may also purchase space in our final on-site program, The ASB Schedule-At-A-Glance. Please view pricing structure, specifications and deadline scheduling on our web site: www.asb.appstate.edu. For additional information you may call or e-mail our Meeting Planner, Scott Jewell, office: 336 421-0034, cell 336 213-7373, A2ZConvention@yahoo.com.

SPECIAL REMINDERS FROM THE PRINT EDITOR

ASB BANQUET ATTENDANCE

Please keep in mind that recipients of ASB awards must be present at the annual ASB banquet to receive the award. Therefore, all applicants for ASB awards must attend the banquet to insure the presence of the winners.

EXTRA ABSTRACT SUBMISSION

Besides sending abstracts of papers and posters to the Program Committee by December 1, 2006, anyone wishing to be considered for an award must send an abstract to the respective award committee chairperson in order to be considered. Checking the box on the registration form for the award is not enough. An abstract must be sent to the chairperson by January 20, 2007.

INSTRUCTIONS FOR SUBMITTING ORAL PRESENTATIONS

All oral presentations will be done using Microsoft PowerPoint only. Presenters should bring a backup copy on a CD disk or flash memory drive.

FINAL SUBMISSION OF CD

Complete and final presentations must be submitted on CD to the audiovisual coordinator to be received by April 11. The first author's name and truncated title should be written on the upper surface of the CD using an indelible marker.

Submit the CD to be received by the April 11 deadline to: ATTN: ASB 2007 Annual Meeting, c/o Mr. Clint Cook, Department of Biological Sciences, University of South Carolina, Columbia, SC 29208.

**ASSOCIATION OF SOUTHEASTERN BIOLOGISTS
EXECUTIVE COMMITTEE MEETING
WEDNESDAY, 29 MARCH 2006
GLENSTONE LODGE
GATLINGURG, TENNESSEE**

ATTENDANCE: 26 individuals attended the meeting.

NAME	CAPACITY	EMAIL ADDRESS
Dwayne Wise	President	daw1@ra.msstate.edu
Kim Marie Tolson	President-Elect	tolson@ulm.edu
Cluadia Jolls	Past President	jollsc@ecu.edu
Tom Wentworth	Vice-President	tom_wentworth@ncsu.edu
Terry Richardson	Secretary	tdrichardson@una.edu
Tim Atkinson	Treasurer	tim.atkinson@carolina.com
Debbie Moore	Executive Committee Member-at-Large	dmoore@troy.edu
Scott Franklin	Executive Committee Member-at-Large	sfrankli@memphis.edu
Dennis Haney	Executive Committee Member-at-Large	dennis.haney@furman.edu
Jim Caponetti	Print Editor	jcaponet@utk.edu
John Herr	Archivist	herr@biol.sc.edu
Patricia Cox	Local Arrangements 2006	pbcox@tva.gov
Joe Pollard	Local Arrangements 2008	joe.pollard@furman.edu
Phil Gibson	Education Committee	pgibson@agnesscott.edu
Lisa Kelly	Senior Research Award	lisa.kelly@uncp.edu
Pat Parr	Committee for Women, Minorities, and Persons with Disabilities	parrpd@ornl.gov
Robert George	Conservation Committee	georgeryt@cs.com
Layfayette Frederick	Place of Meeting Committee	lfrederick@howard.edu
Kenneth Shull	Ad hoc Committee on Meeting Planning	shulljk@appstate.edu
Virginia Martin	Tri-Beta District 1	martinvl@bellsouth.net
Donald Roush	Tri-Beta District 2	dhroush@una.edu
Judy King	SEMS Representative	jking@usouthal.edu
Johnny Carson	SEMS Representative	jcarson@med.unc.edu
Robert Simons	SEMS Representative	rbsimmons@gsu.edu
Charles Faulkner	Southeastern Society of Parasitologists	ctfaulkner@utk.edu
Wayne Carley	National Association of Biology Teachers	wcarley@nabt.org

President Dwayne Wise opened at 1:07 P.M.

Presidents Opening Remarks—Dwayne informed the EC that Terry Richardson is stepping down as Secretary. He emphasized how much the Association owes

him and that we will miss him and his contributions. Dwayne wanted to officially recognize all the efforts he has made.

President Wise called the meeting to order at 1:10 P.M.

OFFICER'S REPORTS

President's Report—Dwayne Wise gave a report. He reminded the EC of some Parliamentary rules before starting. He presented a written report. He stated that he contacted every graduate coordinator in institutions with ASB members in the Southeast and tried to explain why ASB is a meeting they should be attending. There was one response saying they were going to come, but they didn't show up. He said he is going to continue to work on this and has been talking to Kim Marie (President Elect) about it. Dwayne suggested looking at the written report for more details and to see him later if there are any questions.

Past President's Report—Claudia Jolls will arrive later in the meeting, but did provide a written report. Dwayne indicated when she arrives he will ask her to speak about the Complete Naturalist Award she is working on.

President Elect's Report—Kim Marie Tolson was traveling from the Knoxville airport and unable to attend at this time. She provided a written report. Dwayne pointed out that she arranged for the Plenary speaker Dr. White. He said she was already dealing with committee assignments for next year, and asked that if you know somebody that would like to be on a committee to let her know.

Vice President's Report—Tom Wentworth presented a written report. He said he was asked to Chair an ad-hoc committee about presenter no-shows and this committee produced a report. Jim Caponetti and Tom were that committee. The major thing done was to plan a patrons reception for the ASB Patrons which is happening tomorrow morning between 7:00 and 8:00 a.m. in the Glenstone Lodge. He said he had been in touch with many of the patrons who are planning to come. He said all were sent invitations. He invited the EC to join them. He mentioned this was a first and that we are going to give this a try. The idea is to have an hour for a breakfast that recognizes the contributions that the Patrons make. We are going to talk a little bit about the vision that ASB has for the future and how Patrons can contribute to that. Tom passed around a sign-up list for the ASB booth.

Secretary's Report—Terry Richardson gave a written report. He mentioned that everything is going smoothly. All the minutes were done on time and published where necessary. He also reiterated that he will be stepping down after six years as Secretary.

Dwayne suspended the agenda to seek approval of the minutes from the September EC meeting.

Motion 1: It was moved that the September 10th EC meeting minutes be approved as amended.

Motion 1 was seconded.

Motion 1 passed.

It was brought up for discussion that anyone in attendance at an EC meeting should have distributed to them the minutes of that meeting.

Action Item 1: The Secretary should distribute minutes to all in attendance at EC meeting, not just to the EC and committee chairs.

Treasurer's Report—Tim Atkinson presented a written report for review. Tim pointed out how things are changing and that our financial report for last year, this year, and the one we will have for next year will dramatically show how much things are changing. He said ASB had essentially shifted into hyperdrive as far as change was concerned. There are things that are going on with our Organization, our meetings, and our financial reports that are going to be changing considerably simply because business is being conducted in a totally different way. He indicated things are starting to pass through his hands that have never done so before, the biggest example of which is the meeting. In the past, meeting arrangements and meeting finances and all of the paying in and out for meetings has pretty much been in the hands of the LAC, and all that the Treasurer ever saw was the bottom line. ASB would get a bill to pay at the end or would get a check for the money that was left over. That would be the only item that would actually pass through the Treasurer's hands and, as a result, the only item that would appear on the Treasurer's report. With the registration system ASB is using this year, for example, all of the online registrations are going automatically into our checking account. Hence, those are funds now passing through Tim's hands and through the ASB checking account that never have before, so they never appeared on the Treasurer's report before. They have always been on the LAC report instead. Tim reiterated that things are really changing with the way we are operating here in Gatlinburg; all the registration money, all exhibitor's money, everything like that is actually coming through the Treasurer now instead of through the LAC. As a result, all bills that are to be paid are also going out from the Treasurer instead of from the LAC. Tim stated that he believed this all to be good, however, because it raised the visibility of the Association's total financial picture. He did indicate that it made the Treasurer's job tremendously more involved.

There was some discussion about finances related to the 2007 meeting and about whether the Treasurer would need help with the changes that are coming about. This, in turn, led to some discussion of an executive officer for ASB.

Tim reviewed the printed budgets and addressed several questions, most of which related to the new items he mentioned appearing on the budget printouts. Further questions and discussion addressed the registration service ASB is currently using. It was also mentioned that now would be a good time to become a lifetime member due to changes in the dues structure.

Financial Committee Report—Tim Atkinson gave the report. Terry Richardson asked about help for the Treasurer and the Finance committee's involvement. Discussion followed. The idea of hiring a bookkeeper came up and was

discussed. Tim indicated a long-term arrangement with a registration company would likely allow for the company to do the bookkeeping.

Membership Committee Report—Tim Atkinson gave a written report. He pointed out that the report lists the two members who are deceased in 2006, but he mentioned that there may be others, but these were the only two that he knew anything about. The members were William Burbank and Neal Grant. He said it also lists our 6 emeritus status requests. The report also gave some numbers about current membership. It was pointed out that some numbers remain fairly stable, but life membership has more than doubled since last year and regular membership and student membership both show very large increases since last year. Jim Caponetti asked about obituary information for the deceased.

Print Editor's Report—Jim Caponetti gave a written report. Jim indicated he had extra *Southeastern Biology* issues if anyone wanted any. He said that Allen Press continues to do a good job, that FedEx does a good job in back and forth deliveries, and the post office does a good job with the bulk mail. Jim mentioned that we have 20 members that have not received a December, January and April issue in the Hurricane Katrina areas, Belle Chase, New Orleans, and Lake Charles. Jim is checking the USPS website to get numbers, but they are not telling him who is not getting these issues. Jim indicated he is up-to-date with the archives. He said general production costs keep going up, and Allen press and FedEx have raised their rates this past January as has the Post Office, so ASB will have to deal with those increases. This was the biggest April issue ever and the most abstracts at 412. The color cover was a first.

President Wise suspended the agenda.

OFFICER'S REPORTS (suspended)

AFFILIATE REPORTS

Guest Report from NABT—Wayne Carley spoke to the EC. Wayne said he was the Executive Director of the National Association of Biology Teachers, which is a group of approximately 7500 Biology Teachers. We have about 65% of our members faculty teachers, 35% are actually college or university faculty. He continued speaking about possible interaction between NABT and ASB giving as examples things like mutual endorsements of statements, positions, etc. He concluded mentioning that there were a number of areas open for cooperation between the two groups.

SSP Report—Charles Faulkner gave a written report. He indicated it was good for SSP to be back meeting with ASB after a couple of years away. He said SSP is back on track to meet with ASB every other year, but emphasized SSP's desire to have their independent identity maintained. He stated that SSP was originally an affiliate formed out of ASB not the American Society of Parasitologists as is typically thought. They had 37 abstracts submitted with 22 from students. He said they will meet jointly with ASB again in 2008 in Greenville.

OFFICER'S REPORTS (continued)

Web Editor's Report—Terry Richardson gave a written report. He indicated the website had been updated and kept current. Terry indicated he was resigning his position as Web Editor.

Archivist's Report—John Herr provided a written report. John remarked that the head archivist at the University of Georgia had offered to link our ASB archives to search engines. Consideration of this was moved to the Saturday meeting. John said he had established a new archive file for ASB affiliates who wish to archive. The official documents for SEMS affiliation with ASB were transferred from Dwayne to John for archiving.

COMMITTEE REPORTS

Past President's Council—Claudia Jolls was not present, but a written report was provided.

Committee on Women, Minorities and Persons with Disabilities—Pat Parr presented a written report. She said the committee is proposing a name change to be addressed under New Business. Pat discussed the committee's workshop on careers in biology other than medical. She pointed out that this was noted in the previous workshop on minority participation as a needed workshop to help attract minorities to other biology careers.

Conservation Committee—Robert George presented a written report. He commented that a resolution on the ESA had been approved by ASB. He said the committee wanted to encourage symposia on invasive and endangered species and approaching congress for additional funding for threatened and endangered species, and invasive species. Some of these items were to be addressed under new business. Bob presented written concerns from the ESA and questions and discussion arose with respect to ASB officers signing this document. It was generally thought it should be in the form of a resolution.

Motion 2: The statement of concerns be presented to the membership for vote to approve and disseminate to appropriate officials.

Seconded.

Discussion ensued.

Motion 2 failed to pass.

It was agreed that Bob would circulate the document as a petition.

Resolution Committee—Claudia Jolls presented a report. Resolutions on the Gatlinburg meeting and invasive species were presented. Discussion followed. Both resolutions were approved for presentation to the membership.

Break 3:15

Reconvene 3:25

President Wise suspended the agenda

Microbiology Award Committee—Don Roush gave a written report. He presented the wording for changes to the Bylaws. The report was approved.

Local Arrangements Committee 2006, Gatlinburg—Pat Cox reported. She indicated around 800 had pre-registered and about 1,000 were expected at the meeting. Fieldtrips were well subscribed with 151 signed-up. She pointed out that Scott Jewell was instrumental in getting exhibitors to the meeting as well as in several other areas.

Local Arrangements Committee 2007, Columbia—John Herr was present and gave a report. John said the Columbia Convention Center had been engaged and that Scott Jewell had saved a lot through his negotiations. Motels in the area are expensive, but Scott had negotiated rates at \$50 to \$80 a night.

Local Arrangements Committee 2008, Greenville—Joe Pollard gave a report. He said there was not much to report because this meeting is much further out. Joe commented that, based on the numbers from the current meeting, they will soon try to lock down what facility they will use in Greenville for the meeting. He said the Hyatt downtown, which was the site of the '97 meeting is a nice facility but it was a little cramped in '97. Joe was not sure if ASB can hold it there or not. The Hyatt has some additional space in an adjacent building, but it comes down to questions on whether they can guarantee us that space or not because it's technically leased for office space, and if somebody came along and wanted it, then they have it. The other option is the convention center. Joe indicated, however, that it is not in a very nice part of town, with nothing really to do there. He said we may end up having it there with shuttle busses that could take people downtown if they wanted. Some general discussion followed.

President Wise suspended the awards committee reports.

AFFILIATE REPORTS

SEMS—Judy King gave a written report. She mentioned first that SEMS is very glad to be an affiliate of ASB and glad to be here. She said she hoped this will be good for both groups. SEMS has some of their vendors at this meeting, but not as many as normal or as they would have liked. She said next year SEMS's plan is to meet in Atlanta, separate from ASB. She indicated this was historical and it is actually in SEMS bylaws. They hope to meet with ASB the following year. Early abstract submission by SEMS attendees was discussed as was regularly meeting with ASB.

Tri-Beta—Don Roush gave a report. The Tri-Beta program will be at the registration table tomorrow. He said Tri-Beta has a good number of programs. They have 27 posters that will be displaying on Friday morning and about 25 papers, all to be judged. Don thanked the local committee for all their help.

Society of Herbarium Curators—John Herr gave a report. He reported that SHC has become incorporated and they are actually an international society with members all over this country and a couple in Europe.

OLD BUSINESS

There was discussion regarding an official ASB affiliation document and whether or not a finalized document existed. It was agreed that one did and that this matter would be turned over to Kim Marie for Saturday's EC meeting.

Dwayne had created an *ad hoc* committee to examine the way ASB does meetings, the way ASB has done meetings historically, and to come up with recommendations for the future. Ken Shull was here and gave a fairly detailed report. Much discussion followed. Some specific items covered were meeting size and how to handle relatively large meetings, keeping registration affordable, field trips, exhibitors and keeping the data base up to date, detailing the meeting budget in an addendum to the budget. The LAC should strive to break-even at a minimum, and deriving some sort of formula for expected meeting returns.

Dwayne had also created an *ad hoc* committee to look into the problem of dealing with those that submit abstracts but do not show for the meeting. Tom Wentworth gave a report. He first mentioned the need to gather data on "no-shows" and to track them in order to see the severity of the problem. He reported two ideas the committee looked into: blacklisting and a deposit. The committee thought the blacklist approach might be best for ASB. Subsequent discussion included thoughts on a grace period and duration for the listing. Additional discussion included moving the submission of abstracts deadline to closer to the meeting date.

NEW BUSINESS

Lafayette Frederick spoke about future meeting venues. Some university hosts discussed were Marshall, Madison, College of Charleston, and Wofford.

Dwayne introduced the proposal to change the name of the Committee on Women Minorities and Persons with Disabilities to The Committee on Human Diversity. The chair entertained a motion to change the committee's name.


Motion 3: The committee recommended the name be changed from "Committee on Women Minorities and Persons with Disabilities" to "The Committee on Human Diversity".

Motion is from committee and needs no second.

Motion 3 passed and will be presented to the membership at the Friday business meeting.

Some general discussion followed regarding the Complete Naturalist award.

MEETING ADJOURNED

Respectfully Submitted,
Terry D. Richardson, ASB Secretary. 

**Association of Southeastern Biologists
Executive Committee Meeting
Saturday, 11 September 2006
Greenville, South Carolina**

AAAS Representative Report

AAAS met in St. Louis February 20-24, 2006. Some highlights of the meeting of interest to ASB members follow:

Scientists, K-12 Teachers, and clergy met for the "Evolution on the Front Line" event to discuss responses to pressure from students, parents, or local officials to avoid teaching evolution or to introduce creationism or intelligent design into classes.

The Board of Directors of AAAS strongly denounced legislation and policies that would undermine the teaching of evolution.

The AAAS Council passed a resolution against censorship, intimidation, or other restriction on the freedom of scientists employed or funded by government agencies.

In August, 2006, AAAS released a new book, *The Evolution Dialogues*. The book discusses evolution and the rich diversity of Christian responses to the theory along with a quest for common ground. It is meant specifically for use in Christian adult education programs.

AAAS will meet in San Francisco, February 15-19, 2007.

Respectfully submitted,
Bonnie Kelley
AAAS Representative



Report on the ASB Symposium on Bioinformatics and Community Standards April 2006

SHC sponsored a symposium at the 2006 Association of Southeastern Biologists meeting at Gatlinburg, Tennessee entitled "Bioinformatics: Community Standards and Research Questions." The event was co-sponsored by the *Southern Appalachian Botanical Society* and was designed to initiate a discussion among the regional curators concerning the need to develop standards for databasing herbarium collections. All of the presentations are available at the *SouthEast Regional Network of Expertise and Collections* (SERNEC) website at <http://www.sernec.org/>.

Zack Murrell began the symposium with a discussion of the ongoing efforts of SERNEC. This effort, now funded by the *National Science Foundation* as a Research Coordination Network, is designed to coordinate and encourage the activities of the 150 herbaria in the region. The concept underlying this effort is to build a powerful research tool by constructing a database from the specimens and expertise found associated with these herbaria. Murrell made the argument that this tool would be most useful if the contributors were able to reach an agreement regarding a standard methodology for data collection.

Tom Moritz was unable to attend the meeting and his talk on "A Conservation Commons" was presented by Murrell. The gist of this presentation was to show that science has historically been successful through the sharing of information, yet there were many market and institutional factors that are pushing science toward a "commoditization of biodiversity knowledge." Moritz makes the point that technology is changing how we deal with knowledge resources and that it is important for scientists to take control of how their generated data are used. Moritz's presentation introduced the concept of the "conservation commons" as a way to promote and enable "conscious, effective and equitable sharing of knowledge resources to advance conservation." This effort is being championed at a global level and there are guidelines (<http://creativecommons.org/worldwide/>) available to assist scientists in their efforts at developing this Conservation Commons. One of the more important points made in this presentation can be summarized in a quotation by Prusak (2001), "As access to information dramatically expands, so that people increasingly have access to almost all the information they might need at any time and in any place (and, surprisingly, at low or no cost), the value of the cognitive skills still unreplicable by silicon becomes greater."

Rich Rabeler and James Macklin presented an overview of the ongoing networking efforts in the United States. The most recent efforts began in 2004 at a meeting of curators organized by Alan Prather at Michigan State University. At that meeting the group reached consensus on a goal to make all botanical specimens information in US collections available online by the year 2020. Rabeler and Macklin advocated: 1) developing a set of community standards, 2) sharing data entry and the geo-referencing "burden" across the community, and 3) developing methods to increase data capture/processing rates. In order to

increase data capture/processing rates, Rabeler and Macklin are developing a “filtered push” protocol that can be used to exchange record sets between herbaria and, thereby, reducing the effort needed to deal with duplicate record data entry. This “filtered push” protocol would move recorded data to a portal and to data providers that could then provide needed information for geo-locations and/or annotations, or use the information to automatically fill database fields for the duplicates housed in their own collections.

Bob Peet, along with Jessie Kennedy and Nico Franz, addressed a critical aspect of community standards, the challenge of documenting a specimen's identity. Curators within the herbarium community have long been aware of the problem associated with misidentifications. Peet's presentation highlighted the many different ways that a binomial may be applied for any given flora. In trying to standardize databases, there is a need to integrate data from different times, places, investigators and taxonomic standards. Peet made a strong case that the standard list of organisms fails to allow dataset integration because the concepts are not defined and multiple perspectives on taxonomic concepts cannot be reconciled, and stated that “this is the single largest impediment to large-scale synthesis in biodiversity and ecology. The “concept based taxonomy” advocated by Peet included the suggestion that any report of species in publications, datasets, or on specimens should include “not only the full scientific name, but also the reference that formed the basis of the taxonomic concept.” Peet discussed the ongoing efforts of the *Science Environment for Ecological Knowledge* (SEEK) and the *Global Biological Information Facility* (GBIF) to implement the Taxonomic Concept Standards (TCS) adopted by the *Taxonomic Databases Working Group* (TDWG) to incorporate taxon concepts for different uses. Websites for the above organizations are at:

<http://seek.ecoinformatics.org/>

www.gbif.org/

www.nhm.ac.uk/hosted_sites/tdwg/

Alan Weakley gave an overview of the changes in the concepts, names and ranks for taxa in the flora of the Carolinas from 1933 to present. This was a summary of changes seen in Weakley's (2006) *Flora of the Carolinas, Virginia, and Georgia, and Surrounding Areas* (see www.herbarium.unc.edu/flora.htm). Astoundingly, only 16.9 % of the flora of the Carolinas went from Small (1933) to modern treatments without changes in name, rank, or family placement! Weakley addressed the feeling that we all have when faced with having to learn new names or new placements for species that we know well. His work makes it very clear that “change happens, and mostly it is an improvement.” Weakley made the case that we need to embrace this change, and we can best do this by developing a database of concepts that will allow for interoperability and extensibility in the future.

The second half of the symposium addressed the “nuts and bolts” of the issues facing the collections community. Chris Hodge explored the ongoing efforts of digital library development around the world. As a “futurist,” Hodge told us that we should expect the digital collections to be re-used and repurposed and we should develop applications for the user to allow for easy and intuitive manipulation of objects that can be in the form of text, image, audio, video, or

multimedia. One of the major challenges Hodge presented was the need to preserve and secure digital collections in an effective fashion. A second major issue Hodge addressed impacts the development of networks to develop digital collections; this is the need for effective communications among the data providers to maximize effectiveness. The issue of effective communication within networks is crucial to the long term success of these efforts, and there is a need to be attuned to recent innovations in communications in order to foster network development.

Steve Ginzburg discussed ongoing efforts to develop community standards for the botanical community. Ginzburg described the global efforts to develop the Darwin Core, a prescribed set of fields that can form the basis of a global searchable database of biological knowledge. This set of fields is currently being used by GBIF, whose goal is to make all specimen collections available via the World Wide Web. The botanical community standards, or the Botanical Extension, would be added to the Darwin Core, and these plant-specific elements could then be accessed through a web portal for plant data. There is an ongoing discussion of these extensions and Steve Ginzburg is seeking input (sginzbar@biology.as.ua.edu) in order to have the Botanical Extension reflect the consensus of the botanical community.

Charlie Lapham, the creator and developer of *Index Kentuckiensis* (IK), a free software package currently used by many herbaria for specimen databasing, described his efforts to deal with legacy data. Lapham has developed software to take IK data and validate these data, geo-reference the records for mapping, convert existing data from other formats, and restrict access to threatened and endangered taxa. The application is on the IK FTP file server at:

Host Name: [lapham.zftp.com](ftp://lapham.zftp.com)

User Name: [index#lapham.zftp.com](ftp://index#lapham.zftp.com)

Password: affordable

You can also get IK and the legacy conversion software from Charlie (lapham@scrtc.com). These software packages contain three dictionaries (PLANTS, ITIS and a user defined manual), along with look-up tables to restrict fields and keep data more consistent, and to provide data validation during conversions.

Franciel Azpurua-Linares and Fred Rascoe presented a summary of the ongoing efforts to manage information at the national and international level. The structure at the global level is GBIF (www.gbif.org/), which provides a global portal for delivery of biodiversity data to the global community. The US Geological Survey has constructed a national network called the *National Biological Information Infrastructure* (NBII) (www.nbii.gov) that provides a national portal for GBIF. NBII is then divided into various regions, and the *Southern Appalachian Information Node* (SAIN) (<http://sain.nbii.org>) is the region that overlaps with SERNEC. SAIN is currently working with SERNEC to make collections data available to GBIF. This process involves entering the data into the DiGIR Protocol (*Distributed Generic Information Retrieval*) and SAIN is facilitating this process.

Andy Bentley from Specify (www.specifysoftware.org/Specify) presented the latest version of their software package. This software (Specify 5.2) has a Java web server interface with very fast searches, a streamlined DiGIR server installation process and an updated Darwin Core schema. This package is designed for any taxonomic group and the Specify Project supports museums and herbaria in data conversion and training services.

In the three months since this symposium I have realized that the real imperiled resource that is desperately needed in order to achieve global dissemination of primary biodiversity data is the cognitive skills ("unreplicable by silicon") that are found within the herbarium curator's minds. In order to develop networks and make information available to GBIF, we need the taxonomic expertise that is being rapidly lost as taxonomists retire and are not replaced. As we seek resources to digitize herbaria we need to be diligent in procuring funds to support the identification and annotation efforts of curators and support for the training of new curators to provide a new generation of scientists with these valuable cognitive skills. If we fail to support the current and future generations of curators, we will ultimately do irreparable harm to specimen collections and to the potential usefulness of digital collections.

Literature cited

- Weakley, A. S. 2006. Flora of the Carolinas, Virginia, and Georgia, and Surrounding Areas, working draft of June 2006. University of North Carolina Herbarium, NC Botanical Garden, Chapel Hill, NC. www.herbarium.unc.edu/. Accessed July 10, 2006.
- Prusak, L. 2001. Where did knowledge management come from? IBM Systems Journal Volume 40, Number 4, 2001 ["Knowledge Management"], www.research.ibm.com/journal/sj/404/prusak.html Accessed July 10, 2006.

Zack Murrell
Appalachian State University
Boone, North Carolina



Available Positions in the Southeast

Position: Botanist**Institution: Shorter College****Location: Georgia**

Description:

Assistant Professor of Biology, Botany. Fall, 2007. Doctorate required with a BROAD background in the Biological, Environmental, and especially Plant sciences, and a strong desire to teach and advise undergraduates, especially at the freshman level. All duties will initially include General Biology, Botany, Plant Taxonomy, etc. as well as electives in Environmental and Plant sciences. Open until filled. Send cover letter, resume, transcripts, statement of teaching philosophy, and three professional references to **Human Resources, Shorter College, 315 Shorter Avenue, Rome, Georgia 30165, or e-mail**. Shorter College is a Georgia Baptist Convention Institution. EEO.

Position: Biologist/Geneticist**Institution: Columbus State University****Location: Georgia**

Description: Application deadline: 10/20/2006

The Department of Biology at Columbus State University invites applications for a tenure-track position at the level of assistant professor beginning in August 2007. The successful candidate will participate in teaching an introductory biology course, may teach a junior-level genetics course when needed, and will develop one or more senior level courses in the area of their expertise. Supervision of undergraduate research projects is expected. Columbus State University is a rapidly growing institution serving a diverse student body. The department serves primarily undergraduates, necessitating a strong commitment to undergraduate education. There is opportunity to participate in a number of international field biology courses that are strongly supported by the department. For more information on the department and position, visit <http://bio.colstate.edu/>. For fullest consideration, qualified applicants should send a letter of application, CV, statements of teaching philosophy and research interests, copies of all collegiate transcripts, and three reference letters on official letterhead by October 20, 2006. Do not submit applications by email.

Send application materials to: **Genetics Search Committee Chair, Department of Biology, Columbus State University, 4225 University Ave., Columbus, GA 31907-5645, USA**. Applications for part-time and full-time faculty positions must include transcripts of all academic work, and official transcripts must be presented prior to campus visit if selected for interview. Ability to meet Southern Association of Colleges and Schools (SACS) required, in particular a minimum of 18 graduate hours in the teaching discipline. Columbus State University is an Affirmative Action/Equal Opportunity Employer.

Position: Microbiologist**Institution: Elon University****Location: North Carolina****Description:**

Elon University seeks applicants for a tenure-track, Assistant Professor position starting August 2007. Ph.D. and evidence of excellence in teaching are required. The successful candidate will be a broadly trained microbiologist who will develop an active research program with undergraduates, contribute to molecular and cellular core courses, teach classical microbiology, and must be willing to teach in Elon's interdisciplinary general studies program. Additional teaching responsibilities may include an upper level biology elective course and general biology for non-majors. Elon is a dynamic private, co-educational, comprehensive institution that is a national model for actively engaging faculty and students in teaching and learning. To learn more about Elon, please visit our Web site at www.elon.edu. Review of applications will begin October 1, 2006 and continue until position is filled. Applications must be received by November 1 to be assured of consideration.

Send letter of application, CV, statements of teaching philosophy and research goals, copies of transcripts, and three letters of support to: **Dr. Robert Vick, Search Committee Chair, Biology, 2625 Campus Box, Elon University, Elon, NC 27244. Inquiries are welcome at vickrs@elon.edu.** Elon University is an equal opportunity employer committed to a diverse faculty, staff, and student body. Candidates from under-represented groups are encouraged to apply.

Position: Environmental Scientist**Institution: Jackson State University****Location: Mississippi****Description:**

Jackson State University, located in metropolitan Jackson, is the 4th largest state supported institution in Mississippi with an enrollment of approximately 8,500 students. The College of Science, Engineering, and Technology consists of two academic schools: The school of Engineering with four departments (Civil and Environmental Engineering; Communication Engineering; Computer Engineering; and Computer Sciences), and the School of Science and Technology with five departments (Biology; Chemistry; Mathematics; Physics, Atmospheric and General Science; and Technology); the Multi-disciplinary Environmental Science Ph.D. Program; and the Department of Aerospace Studies. Over 2,000 students are enrolled in the undergraduate and graduate programs, and 100 full-time faculty members are involved in teaching, research and service.

The Environmental Science Ph.D. Program and the Department of Biology, Jackson State University at Jackson, Mississippi invites applications for a 12-month research assistant professor position in molecular environmental health. The start date for this position is October 01, 2006. The candidate selected will be required to coordinate research activities in the Cellomics and

Toxicogenomics laboratory; perform tissue cultures, cytotoxicity, genotoxicity, western blot, FACS, microarray, and confocal microscopy experiments; assist in grant proposal developments and research implementation; teach laboratory courses at both undergraduate and graduate levels; develop and teach courses in areas of scientific expertise, and train students in specific research protocols. The successful candidate is expected to have a Ph.D. in environmental science, environmental health, or related sciences; a minimum of two years of research experience in molecular environmental health; experience with the use and operation of analytical biomolecular technologies; and familiarity with GPLs.

Review of applications will begin September 20, 2006, and will continue until the position is filled. Candidates interested in this position should send a letter of application, curriculum vitae, academic transcripts, and three letters of recommendation to: **Dr. Paul B. Tchounwou, Interim Associate Dean & Director, Environmental Science Ph.D. Program, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, Box 18750, Jackson, Mississippi 39217, Tel. (601) 979-2153 Fax: (601) 979-2058 E-mail: paul.b.tchounwou@jsums.edu.** Jackson State University is an equal opportunity, affirmative action employer.

Position: Stream Biologist

Institution: James Madison University

Location: Virginia

Description:

The Department of Biology at James Madison University invites applications for a tenure-track position at the ASSISTANT PROFESSOR level, beginning August 2007. A Ph.D. is required, as well as evidence of a strong commitment to undergraduate teaching and to establishing an active, externally supported research program involving undergraduates and master's level students and interdepartmental collaboration.

Preference will be given to candidates using experimental and/or quantitative methods. Postdoctoral research is desirable. Numerous potential collaborations are available with faculty in Biology, Chemistry and Geology working in local streams and regional watersheds. JMU is ideally situated in the central Appalachians of Virginia providing teaching and research environments with abundant and diverse stream habitats.

Teaching responsibilities include a course in aquatic ecology and lower division biology courses for either majors or nonmajors.

JMU is an Equal Opportunity/Affirmative Action/Equal Access Employer and especially encourages applications from minorities, women, and persons with disabilities. **E-mail: wyngaaga@jmu.edu, Grace Wyngaard, Chair, Stream Biologist Search Committee**

Position: Cellular Biologist**Institution: Murray State University****Location: Kentucky****Description:**

Assistant Professor (Cellular Biologists), Department of Biological Sciences, Murray State University. Two full-time, tenure-track faculty appointments to begin August 2007. Ph.D. along with research interests at the cellular level, and a strong commitment to establishing a research program involving undergraduate and graduate students required. Postdoctoral research, teaching experience, a record of quality publications, and evidence of the ability to attract extramural funding preferred. Specific research areas are open, but preference will be given to individuals with interests in any of the following areas: mechanisms of gene expression, cellular bioinformatics, cell signaling, or cell differentiation. Teaching responsibilities will include undergraduate and graduate level courses commensurate with departmental needs and the individual candidates' expertise. Application deadline: October 6, 2006.

To apply: Submit letter of interest, curriculum vitae, statements of teaching interests and philosophy, description of research, relevant reprints, copies of transcripts, and three letters of recommendation to: **Dr. Timothy Johnston, Search Committee Chair, Department of Biological Sciences, 334 Blackburn Sciences Building, Murray State University, Murray, Kentucky 42071.** Women and minorities are encouraged to apply. Murray State University is an equal education and employment opportunity, M/F/D, AA employer.

Position: Organismal Field Biologist**Institution: Transylvania University****Location: Kentucky****Description:**

Transylvania University, a selective, private, liberal arts college of 1,100 students, invites applications for a TENURE-TRACK ASSISTANT PROFESSOR starting September 2007. Ph.D. preferred; motivation and commitment to achieve excellence in teaching and involve undergraduates in research required. Teaching responsibilities include introductory biology course with laboratory and upper-level electives in specialty. Teaching load is two classes with laboratory sections per regular term and one class in May Term. The college has recently initiated an excellent faculty development program that competitively funds student and faculty research. Personal laboratory space provided. Bingham Awards for Excellence in Teaching may provide substantial salary supplements for exceptional candidates or smaller start-up awards for recent Ph.D.s. In your cover letter please identify and describe 2 specialty courses you would like to teach and how you would actively engage students in your classes. Also send curriculum vitae, graduate and undergraduate transcripts; and three letters of recommendation. Review of applications will begin on October 15th and will continue until an appointment is made.

Send applications to: **Dr. James Wagner, Division of Natural Sciences and Mathematics. Transylvania University, Lexington, KY 40508. USA. Telephone: 859-233-8228; FAX: 859-233-8171. E-mail : jwagner@transy.edu**

Transylvania University is an Equal Opportunity Employer and is committed to building a faculty that reflects the diversity of American society.

Position: Biologist

Institution: Troy University (Dothan)

Location: Alabama

Description:

Biology/Biology Education: The Dothan Campus of Troy University seeks applicants for this full-time, ten-month, tenure-track, assistance or associate level faculty position in the College of Arts & Sciences. Requires earned doctorate who has the background to teach Principles of Biology, Microbiology, Plant Form and Function, Plant Diversity, Field Botany, Economic Botany, and Cell Biology. Position begins January 1, 2007. Consideration of applications will begin immediately and continue until position is filled.

Send letter, CV, graduate transcripts, and three letters of reference to **Human Resource Director, Troy University Dothan Campus, P.O. Box 8368, Dothan, AL 36304**. Troy University Dothan is an EEO/AA/ADA employer and encourages applications from all minorities. Anyone requiring special accommodations is encouraged to contact the Human Resource Director at (334) 983-6556, Ext 208.

Position: Mycologist

Institution: Valdosta State University

Location: Georgia

Description:

The Department of Biology at Valdosta State University is seeking applications for a Mycologist to fill a tenure-track, academic-year faculty position at the Assistant Professor level to begin in August 2007. The successful candidate will teach majors and non-majors introductory biology courses, mycology, and other courses in the candidate's area of expertise. Research specialization can be in any area of mycology but preference will be given to candidates whose research will broaden the potential experience for our undergraduate and Master's-level graduate students.

Candidates must possess a Ph.D., must have an active research program that can be continued, and must have a strong commitment to undergraduate and graduate teaching. The candidate will be expected to include students in their research program. Post-doctoral research experience is preferred.

Applicants should submit a letter of application, faculty application form (http://www.valdosta.edu/academic/forms/fac_employment_app.pdf), current curriculum vitae, a summary of research interests and teaching philosophy,

copies of academic transcripts, and three letters of reference under separate cover to: **Mycology Search Committee, Dept. of Biology, Valdosta State University, Valdosta, GA 31698-0015**. Review of complete applications will begin October 13, 2006 and continue until the position is filled.

Position: Cellular Biologist/Animal-Human Physiologist

Institution: Wofford College

Location: South Carolina

Description:

Tenure-track position in Cell Biology and Animal-Human Physiology. Additional courses in accordance with expertise and departmental needs. Background in developmental biology and an interest in research with undergraduates desirable.

Wofford: a nationally ranked liberal arts college, one of five private institutions in the Carolinas with a chapter of Phi Beta Kappa, 1300 students, excellent facilities, convivial culture, commitment to curricular excellence and innovation. Applicants should have PhD and sincere commitment to teaching and mentoring undergraduates. Rank and salary will be commensurate with experience.

Send letter of application, resume, statement of teaching philosophy, and list of references to: **Dr. George Shiflet, Chair, Department of Biology, 429 N. Church Street, Wofford College, Spartanburg, SC 29303-3663. USA. E-mail: shifletgw@wofford.edu. Phone : 864-597-4625**. Review of applications will commence October 1 and continue until the position(s) are filled. Further information: 864-597-4625 or e-mail shifletgw@wofford.edu. AA/EOE.



The *Southeastern Naturalist* . . .

- ◆ A quarterly peer-reviewed and edited interdisciplinary scientific journal with a regional focus on the southeastern United States (ISSN #1528-7092).
- ◆ Featuring research articles, notes, and research summaries on terrestrial, freshwater, and marine organisms, and their habitats.
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Classified Ads for Northeastern and Southeastern Naturalist

Classified ads offering opportunities for people with career interests in the natural history sciences may now be placed in the *Southeastern* and/or *Northeastern Naturalists*, within the following categories.

- Faculty positions at colleges and universities
- Graduate student fellowships and assistantships
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Ads need to be received by February 20, May 20, August 20, and November 20, and must be placed over the web at <http://eaglehill.us/Merchant2/merchant.mv>. Journal issues mail about one month later. Rates are a modest \$.03/character, with a \$5 minimum. Space allocated to classified ads within the journal is limited. Ads will be reviewed prior to acceptance.



The plant molecular biology laboratory of Beth Krizek, Department of Biological Sciences, University of South Carolina.

**ALL TAXA BIODIVERSITY INVENTORY (ATBI)
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ATBI is an organization devoted to surveying all life in the Great Smoky Mountains National Park.

More information about the ATBI and Discovery Life in America (DLIA) may be obtained from the Administrative Officer, Jeanie Hilten, by e-mail jeanie@dlia.org. The website is <http://www.discoverlifeinamerica.org> or at <http://www.dlia.org>. The mailing address is Discover Life in America, 1314 Cherokee Orchard Road, Gatlinburg, TN 37738. The telephone number is (865) 430-4752.☞

**SOUTHERN APPALACHIAN FOREST COALITION (SAFC)
ASHEVILLE, NORTH CAROLINA**

As stated in their newsletter *Across Our Mountains*, SAFC is an organization dedicated to "working together to protect and restore southern Appalachian forests."

More information about SAFC may be obtained from their web site at <http://www.safc.org>, and by e-mail at safc@safc.org. The mailing address is Southern Appalachian Forest Coalition, 46 Haywood Street, Suite 323, Asheville, North Carolina 28801-2838. The telephone number is (828) 252-9223.☞



The A. C. Moore Herbarium,
University of South Carolina,
John Nelson, Curator.

BOOK REVIEWS

Debbie Moore, *Review Editor*
Department of Natural Sciences
P. O. Box 8368, Troy University
Dothan, AL 36304-8368

McEachran, J.D. and J. D. Fechelm. 2005. **Fishes of the Gulf of Mexico. Vol. 2. Scorpaeniformes to Tetradontiformes.** University of Texas Press, TX. \$125.00. 1004 p.

Volume 2 of the *Fishes of the Gulf of Mexico* completes the compilation of 1,443 species known from that area (Vol. 1 published in 1998 treated 1,110 species in 40 orders). Page 1 notes 693 species in four orders are treated in Volume 2 while on page 4 656 species. The differences are species omitted or new to the Gulf (pp. 14-19). Sixty-six species (17%) in 27 families are endemic to the Gulf and the Gulf's total fish fauna is less than that of other parts of the Atlantic (p. 13).

Keys to families and species treat each species along with a drawing, characteristics, distribution, colors, sizes and pertinent references. Although all but 119 (17%) of the species are drawn, many species depictions seem boxy or too sharp, thereby distorting the fish's true appearance: i.e., pepper bass (p. 164), pinfish (p. 402), silver seatrout (p. 422), orange filefish (p. 905). etc. Caution should be used in identifying *Rhinoptera brasiliensis* from *R. bonasus* as the use of number of teeth rows and shapes are poor characters, as often specimens indicating either species can occur in the same catch (p. 15) with a wide range of teeth and sizes from 7-10 rows. The common name for *Epinephelus itajara* is goliath fish—not jewfish (p. 146). *Remorina albescens* (p. 262) has been found on *Mobula mobular* (Schwartz 2004a). A number of species distributional ranges (over 16) extend from North Carolina southward—not just South Carolina southward: i.e., *Rypticus saponacius* (p. 179), *Seranus phoebe* (p. 189), *Uraspis secunda* (p. 303), *Bodianus pulchellus* (p. 308), *Aristremus virginicus* (p. 365), *Ctenogobius stigmaticus* (p. 693), *Gobionellus oceanicus* (p. 705), *Melichthys niger* (p. 899), *Sphaeroides pachygaster* (p. 926) and at least six specimens of gobies occur in North Carolina (Ross and Rhode 1987; Quanttrini et al. 2004; Schwartz 1999, 2004a, 2004b, 2004c). A glossary of terms occupies pp. 943-949; references (to 2002) on pp. 951-985 and indexes to scientific names on pp. 987-996, common names (pp. 997-1004).

Although some of the drawings are not distinct and a number of the ranges fall short of being noted extending to North Carolina, this is a well-written volume that will be of immense use to researchers and students of the Gulf of Mexico fishes. It, along with the 3-volume *Fishes of the Central Western Atlantic* (Carpenter 2002, FAO, Roue), does much to define and treat the *Fishes of the Gulf of Mexico*. Get them all, you can't go wrong.

Literature Cited

Quattrini, A. M., S. W. Ross, K. J. Sulak, A. M. Neoise, J. L. Casazza and G. D. Dennis. 2004. Marine fishes new to the Continental United States, North Carolina, and Gulf of Mexico. S. W. Nat. 3(1): 155-172.

- Ross, W. W. and F. C. Rhode. 2004. The gobioid fishes of North Carolina (pisces: Gobeoidei). *Bull. Mar. Sci.* 74(2): 287-323.
- Schwartz, F. J. 1996. Unusually large pinfish, *Logodon rhomboids* (Pisces: Sparidae) caught in North Carolina waters. *ASB Bull.* 43(3): 176-178.
- Schwartz, F. J. 1999. Gobioid fishes of North Carolina. *J. Elisha Mitchell Sci. Soc.* 115(4): 281-293.
- Schwartz, F. J. 2004a. Five species of sharksuckers (family Echenidae) in North Carolina. *J. No. Car. Acad. Sci.* 120(2): 44-49.
- Schwartz, F. J. 2004b. Biological features of five poorly known Carangid fishes frequently inland and ocean waters of North Carolina. *J. No. Car. Acad. Sci.* 120(3): 99-105.
- Schwartz, F. J. 2004c. Occurrences and distributions of some Labrid, Ostraciid, and Diodontid (Class Actinopterygii) fishes in North Carolina. *J. No. Car. Acad. Sci.* 120(4): 167-171.
- Schwartz, F. J. 2005. Sizes and distributions of soapfishes (family Serranidae) and razorfishes (family Labridae) in North Carolina. *J. No. Car. Acad. Sci.* 121(2): 71-76.

FRANK J. SCHWARTZ, *Institute of Marine Sciences, University of North Carolina, Morehead City, NC 28557-3209.*✉

Van Lancker, Julien L. 2006. **Apoptosis, Genomic Integrity and Cancer**. Jones and Bartlett Publishers, Boston, MA. \$114.95. 422 p.

Julien L. Van Lancker, MD, is Professor Emeritus of Pathology and Laboratory Medicine as well as Professor Emeritus of Radiation Oncology at the University of California School of Medicine in Los Angeles. The book is organized into three parts with an introduction to apoptosis (programmed cell death), a section on the integrity of the genome, and a section on cancer cells. The book comprises 26 chapters and contains up-to-date details about apoptosis the process, agents that trigger apoptosis, genes and proteins involved in the process of cell cycle arrest and related topics. The P53 family of cell-cycle regulator proteins and many other topics pertinent to an understanding of programmed cell death and its relevance to cancer biology are discussed. This book would be tough sledding for an undergraduate course, but is well-suited for a graduate or specialty course in programmed cell death and the cell cycle. Researchers working in this field will be rewarded with up-to-date references at the end of each chapter and many explanatory diagrams, although the lack of color diagrams is a bit of a hindrance. The book is quite dense with relatively few diagrams, given the complexity of the subject matter and the lack of color reinforces its density. However, for those who are interested in cell cycle regulation and programmed cell death, this book would be a welcome addition to the bookshelf. The author has done a thorough job of describing and discussing the relevant pathways, and has provided a multitude of details, which are useful for those interested in the subject.

DWAYNE A. WISE, *Department of Biological Sciences, Mississippi State University, Mississippi State, MS 39762.*✉

NEWS OF BIOLOGY IN THE SOUTHEAST

Ricky Fiorillo—*News Editor*
Department of Biology
University of Louisiana at Monroe
Monroe, LA 71209
fiorillo@ulm.edu

ABOUT PEOPLE AND PLACES

LOUISIANA

University of Louisiana at Monroe, Department of Biology. Six new faculty have joined the department. Dr. Joydeep Bhattacharjee received his Ph.D. from Texas Tech University, and his research is focused on plant and restoration ecology. Dr. Ricky Fiorillo research interests are in ecological parasitology and amphibian ecology. He received his Ph.D. from Mississippi State University. Also joining the department are Dr. Allison Wiedemeier (Ph.D., University of Missouri), Amanda Knobloch (M.S., University of Louisiana at Monroe), Marlena Koper (M.S., Miami University) and Jerry Brunson (M.S., University of Louisiana at Monroe).

NORTH CAROLINA

Dr. Clarence Styron has accepted the position of Director of the Outer Banks Center for Wildlife Education near the Currituck Beach Lighthouse in Corolla, NC. The center emphasizes the cultural and natural history of the northern Outer Banks. Informal classes are offered on ecology and other topics, trails extend from Currituck Sound to the ocean, and an exhibit gallery emphasizes the importance of hunting and fishing to residents of the area.

Please email any news items to fiorillo@ulm.edu.



OBITUARY

**Albert E. Radford (1918-2006)—A Remembrance,
with Reminiscences of Former Students**

Albert E. Radford (Fig. 1), noted plant taxonomist and plant conservationist, died on 12 April 2006, at age 88. He was surrounded by family in Columbia, Missouri, where he and his wife Laurie had moved in August 2003. The cause of his death was malignant melanoma of the head and neck that first appeared in the fall of 2003. Despite a couple of surgeries and radiation treatments, the disease progressed rapidly in mid-January 2006 until his passing. The resulting disfigurement, chronic wounds, and paralysis did not dampen his joy of life. He "accepted his lot very stoically," according to his daughter Linda Vinson (2006), and he valiantly fought the disease. The challenge instilled in him a singular sense of patience, a trait for which he was not especially known

Radford's botanical renown includes the well-known and well-used *Manual of the Vascular Flora of the Carolinas*, for which he was the chief investigator along with colleagues Harry Ahles and C. Ritchie Bell (Radford, Ahles and Bell, 1968). His contributions in plant systematics and plant conservation won him national recognition. Several publications provide biographical insight on Radford. A brief account of his life appears in a family history (Harvill and Harvill, 1995), and a tribute to him provides biographical background as well as his contributions to botany and plant conservation (Burk and Weakley, in press). Remembrances of Radford by Peter S. White (2006) and Alan S. Weakley (2006) also provide personal



Figure 1. Albert E. Radford, ca. 1985. (Photo by Lance Richardson Photography; courtesy of the University of North Carolina Herbarium [NCU].)

perspectives on him. This present memorial paper looks at his involvement with the Association of Southeastern Biologists (ASB) and focuses on his influence in botany as a teacher including reminiscences of his former students.

A glimpse into Radford's life will place this account into perspective. Born in Augusta, Georgia, on 25 January 1918, Albert Ernest Radford was the son of Albert Furman and Eloise (Moseley) Radford. After completing high school, he enrolled at the Junior College of Augusta and subsequently transferred as a junior to Furman University, where he developed an interest in botany and received the B.S. degree in 1939 (Fig. 2). University of North Carolina botanist William C. Coker recruited Radford as a graduate student to Chapel Hill. Arriving at UNC in August 1939, the young scholar became fascinated by his botanical studies and enjoyed his assistantship in the herbarium. In this setting, he met herbarium curator Laurie Stewart with whom a romance developed. Their marriage eventually followed on 10 October 1941. Radford's education was interrupted with service in the U.S. Army from 1941 to 1945. Returning to UNC in January 1946, he completed his doctorate in 1948. His dissertation, *The Vascular Flora of the Olivine Deposits of North Carolina and Georgia* (Radford, 1948) launched his interest and investigations in the relationship of soil, minerals, rocks, and topography in the distribution of plants. For the next forty years, he devoted his professional career at UNC in the Department of Botany (later Biology), studying the Carolina flora and its habitats, furthering the cause of conservation, writing papers and books (Burk, Rogers and Appleton, 2006), serving in learned societies, and teaching (Fig. 3). He advanced in the academic ranks: instructor (1946-1949), assistant professor (1949-1953), associate professor (1953-1958), professor (1958-1987), acting chairman (1964-1965), and professor emeritus (1987-2006).



Figure 2: Albert E. Radford, 1939. (From *Bonhomie*, yearbook of Furman University 1939: 69; courtesy of Special Collections and Archives, Furman Univ.)

Early in his career, Radford was elected to or joined a number of professional associations. He was particularly active in several organizations that promoted scientific inquiry in the Southeast. These were the Association of Southeastern Biologists, the Elisha Mitchell Scientific Society (ceased 1983), the North Carolina Academy of Science, and the Southern Appalachian Botanical Society (formerly Club). In the ASB, he served on the Executive Committee and frequently attended its annual meetings where he presented a number of papers. Two themes dominated his presentations: the flora of the Carolinas and teaching plant taxonomy and systematics. Recognizing Radford's excellence in teaching, the Association conferred on him a Meritorious Teaching Award in 1978.

When Radford resumed his graduate studies at UNC in 1946, he was appointed an instructor in botany, filling the post vacated by P. H. Waring Webb.



Figure 3: Albert E. Radford in greenhouse, Coker Arboretum, UNC, 1962. From *Yackety Yack*, yearbook of the University of North Carolina 1962: [43]; courtesy of the editors of the *Yackety Yack*.

For at least the next twenty years, Radford taught General Botany, an undergraduate course, and developed a manual to be used in its accompanying laboratory (Radford, 1950, 1954; Radford and Bell, 1961). His classroom teaching leaned toward the Socratic style, in which he would pose questions as he discussed basic principles. According to a former student, he asked pupils who gave unsatisfactory responses in the classroom to

report to his office afterward. Some students would drop the course following the consultation. This was not an uncommon way in which Radford weeded out the slackers from his classes. In the laboratory, students observed and experimented with plant material (living or preserved) as a means of extending their knowledge learned in the lectures. They were required to make penciled drawings that were approved at the end of each lab period. Radford's strict standards also applied here as two points would be deducted from their final grade for each unexcused session. He also taught other undergraduate courses: Local Flora and Cryptogamic Botany (later titled Lower Plants). Advanced undergraduates could enroll in several graduate courses taught by Radford: Dendrology, Field Botany, Field Training in Natural Diversity, Plant Ecology, and Taxonomy of Flowering Plants (later titled Taxonomy of Vascular Plants and subsequently Principles of Plant Systematics).

Radford devoted significant emphasis on graduate instruction. Along with J. Edison Adams, C. Ritchie Bell and Henry R. Totten, he successfully developed a graduate program in plant taxonomy that was among the best in the country. The principal graduate courses that he developed were Floristics (later titled Principles of Taxonomy) and Plant Ecosystematics. On occasion, he also taught Advanced Taxonomy. Field trips were an integral part of most of these courses.

One of the greatest influences that Radford made in botany was the training of graduate students (Fig. 4). He was the major advisor of at least 61 graduate students: 20 Ph.D., 28 M.A., and 13 M.S. (Table 1). These scholars made their professional careers in a variety of fields such as college and university professors, curators of museums, leaders in conservation, and government leaders in land-management agencies.



Figure 4: Albert E. Radford lecturing in Plant Taxonomy Laboratory, room 418 Coker Hall, UNC, 1960s. Photo taken by Laurie S. Radford; courtesy of the University of North Carolina Herbarium [NCU].

As a teacher, Radford garnered the respect of undergraduates and graduates alike, from

whom he expected high scholastic standards. His students and colleagues noted his "infectious enthusiasm and energy" (Murphy, 1978). He fittingly earned recognition and distinction for his teaching witnessed not only by the ASB Meritorious Teaching Award but also by the 1956 Tanner Faculty Award for Excellence in Undergraduate Teaching at UNC.

One gains an appreciation of the legacy that Radford left as a teacher through the reminiscences of his former graduate students. The following passages provide a window in learning about Radford as a professor and about his courses, particularly his field trips, which reflected the quintessence of many of his graduate courses. Reminiscences of other graduate students (Steve Leonard, L.L. Gaddy, J. Dan Pitillo, and J. Rex Baird) are accessible from the UNC Herbarium's web site (UNC-H).

Remembering Dr. Radford, by John Burk

(John completed his M.A. and Ph.D. degrees under the supervision of Radford from the fall of 1957 to the spring of 1961. He is Elsie Damon Simmonds Professor of Biological Sciences at Smith College.)

One of Dr. Radford's greatest strengths as a dissertation advisor, at least in the late 1950s, was the unusual measure of what he gave his students in developing their theses, once he was convinced that his students were firmly committed to their individual research projects. There may have been a short-term loss from this (aspects of the work that might have been carried out better otherwise) but far greater long-term benefits for those of us who would go on to long careers in academia or government research (I'm thinking of Messrs. Ramseur, Horton, Duke and myself in particular here). He was nonetheless generous, when asked, in providing advice, in verifying and sometimes simply volunteering plant identifications, and in providing an atmosphere of general moral support. I think most of us touched bases with him on some pretext every day or so.

I have fond recollections of Radford's field excursions. His Murphy to Manteo field trips for Plant Ecology (usually conducted over the course of two long weekends) were extraordinary experiences in a variety of ways. One I frequently

retell involved a morning wake-up in a motel on Roanoke Island. Although Dr. Radford kept rather firm discipline within the group during the day-time hours, he usually let us out on our own to pursue a degree of carousing in the evenings. Nonetheless, it was implicit that dire consequences awaited anyone who failed to get up promptly and out to the van when awakened in the morning. On this particular night, the students occupied a series of rooms running down the long front of the building. Clyde Umphlett and I shared a room and were awakened by Dr. Radford later in the morning than we had expected. He was pounding on the door and shouting that he was taking the rest of the group to breakfast and would return for us at once. To our great relief, he returned in a far better temper than we anticipated, after he realized that instead of knocking on our door, he had pounded on the adjacent linen closet. "The funny thing was," he noted, "someone inside answered!"

In late June 2006, my wife and I were botanizing on the island of Sylt off the north German coast near Denmark with Kai Jensen, a plant ecologist at the University of Hamburg. Kai was pointing out various aspects of the flora, including the little dune grass *Aira praecox*, and I realized that I had collected this species in Hatteras Village in May 1960. I remarked that I had taken the specimen in to show Dr. Radford as soon as I got back. He looked at it; his face brightened. He had said with obvious approval, if not delight, "State record!" And, indeed it was. What I recall and cherish was Al Radford's obvious enthusiasm for his work as well as the work of his students, particularly for their joint discoveries in the Carolina flora.

Reminiscences of Dr. Radford, by Ed Bostick

(Ed completed his graduate degrees at UNC, earning an M.A. under the supervision of Radford from 1961 to 1964 and a Ph.D. under C. Ritchie Bell from 1964 to 1966. He is Professor Emeritus of Biology, Kennesaw State University and is part-time adjunct at Kennesaw State University and Georgia Highlands College.)

Dr. Radford taught Plant Ecology. The course involved little lecture but a lot of field experience. We were expected to recognize the dominant plants of most of the major habitats of North Carolina... about 500 species. Field trips extended from the Blue Ridge balds to the Hatteras salt marshes. At exam time, we were required to identify herbarium specimens and to be able to state the habitat in which they occurred. Although there was a set of study specimens, most students tried to collect their own set or at least a set for their work team as we visited the various habitats. Al Radford was famous for the speed at which he walked and talked during these expeditions, so we soon learned to divide up into two-man teams: one to collect, tag, and bag the specimens; the other to take notes "on the run". I still have some of these notes...sweat-, blood-, and water-stained and almost illegible. One of my field partners stepped out of the van and into a roadside canal into neck-deep water. The precious notes were held high as he sank.

For a field botanist, Dr. Radford was tragically susceptible to poison ivy. I have seen him with large blisters on his bald head. He even was affected by old dried herbarium specimens. While I served as the TA for his Plant Ecology course, one of the students asked me the identity of a shrub with pinnately-

compound leaves on a field trip to a swamp forest in eastern North Carolina. I didn't recognize it, so I broke off a large sample and approached Dr. Radford for an identification. He saw me coming and ran in the opposite direction, yelling "Poison Sumac! Poison Sumac!" over his shoulder. It was the only time he ever showed fear. He was more than a little amused when I broke out with a rash.

As evidence of his dedication to botany and taxonomy, he asked me how many plant specimens I collected on my honeymoon to Nova Scotia in 1964. He seemed disappointed when I told him that it was not a botany field trip.

Remembering Dr. Albert Radford, by Jeannie Wilson Kraus

(Jeannie completed an M.A. degree under Dr. Radford's direction from 1974 to 1978. She is currently Natural Science Curator/Public Programs Coordinator at the North Carolina Maritime Museum, North Carolina Division of History Museums. Her tribute was previously published in *Native Plant News; the Newsletter of the North Carolina Native Plant Society*, 4[3]: 1. 2006.)

Dr. Radford's classes were both unforgettable and thought provoking! His teaching style was reflected by his military experience in WWII. His famous course, Plant Ecosystematics, was conducted like a military mission.

Always departing promptly at 0700, the caravan of Suburbans (Fig. 5) carrying eager graduate students covered a wide territory in the southeastern states from West Virginia to Georgia. Dr. Radford could both drive and observe the vegetation with eagle eyes (botanizing at 50 miles an hour was indeed an art). Teams of intrepid students with notebooks and collecting bags were sent out like soldiers to collect data within random "quarter points" on the canopy, shrub and herb layers, rocks and soils. The "cerebration" team analyzed the environmental and man-made influences on the vegetation.



Figure 5: Albert E. Radford and students in the parking lot of Coker Hall, UNC, preparing for a field trip, late 1960s. Photo taken by Laurie S. Radford; courtesy of the University of North Carolina Herbarium, [NCU].

The first stop of the day was usually a wet stop or a difficult one (rain never hindered the mission). Climbing a rocky mountainside in the pouring rain, with only *Smilax* for hand-holds is a vivid memory. Only later when a gentle path was discovered nearby, would he give his characteristic, "knowing laugh." The last stop of the day after we were dry again would invariably involve a stream to cross, often waist deep and very cold because the interesting plants were always on the other side. Only later was a footbridge pointed out nearby.

Classes camped to save money, though not in campgrounds, but in interesting places, such as the beach near Duck, the sandhills in the wilds of South Carolina, and in the bone-chilling cold of the WV mountains. (Dr. Radford would find comfortable quarters in a nearby motel). After students were bleary-eyed from lack of a good night's sleep, he banned camping for future classes. Dangers lurked everywhere though there were surprisingly few mishaps. One had to watch for poisonous snakes, slippery rocks in mountain streams, treacherous boulder fields on mountain slopes, navigate rocky cliffs, and of course be subjected to all weather conditions. It was all part of the experience!

Exams were a collection of plants from the trips placed around the lab to identify as well as what rock or soil type or plant community it grew in. Nevertheless, the experience forged a common bond among students that remains today.

The greatest gift from Dr. Radford was opening our eyes to observe the environment, analyze why plants grew where they did, and use all the clues at hand to discover what made each plant association different. During the trips students realized that it was not a mere learning exercise but valuable data and information collecting. Class reports helped form detailed descriptions of plant communities of the southeast and was a basis for conservationists to preserve the best remaining plant communities and their associated species. Thank you, Dr. Radford!

Dr. Radford, a Pioneer, by Robin Huck

(Robin received M.A. and Ph.D. degrees under the guidance of Dr. Radford from 1974 to 1985. She was the second woman to complete a doctoral degree from Radford. She commemorated him by naming the coastal plain endemic *Dicerandra radfordiana* Huck. Robin is associated with the Florida Museum of Natural History, University of Florida.)

Dr. Radford was a pioneer in the recognition of natural landmarks in the United States. He developed schemes to quantify the aspects of unique ecosystems at a time when mid-20th century U.S. was just waking up to the importance of preserving important lands of our natural heritage. He insisted on a complete listing of plant species at each locale. Many have copied his ideas or have incorporated them into their programs without mention of his name. He has long deserved national recognition for his life-long achievements in this field.

He trained a whole group of students to carry out his ideas in a course called "Ecosystematics of the Southeastern United States". Like a mix of Patton-like tanks and explorer-enthusiasts, we were introduced to some of the most unique ecosystematic gems in the Southeast: the granitic outcrops in Georgia, Shealey's Pond in South Carolina, Dolly Sods in West Virginia, and of course, the coastal communities of North Carolina among them. Each site visit was carefully timed for beauty (Fig. 6). On Easter weekend I will never forget visiting Cammassia Flats, a mucky basin out in the middle of the corn fields of York County, S.C. *Camassia scilloides* (Wild Hyacinth) and *Zephyranthes* (Easter Lily) were in full bloom. In the course, there was no text. "Figure out the relationships," he would say.



Figure 6: Albert E. Radford and his class on a field trip to Sandy Bay, Pamlico Sound (Dare County), North Carolina, October 1978. Photo taken by Laurie S. Radford; courtesy of the University of North Carolina Herbarium [NCU].

In his classes, Dr. Radford had a slightly perverse sense of humor when it came to the students from Duke. He enjoyed putting the Duke students to a stronger test (they had comfortable cushioned seats in their auditorium; ours were hard at UNC), and to his pleasure they never seemed to take his words seriously. They were left behind when field trips left exactly at 8 AM, and some were left in tears when they did not understand what the simple words “learn the plants” meant at exam time. I remember a few became lost on a field trip to the Smokies, and they are probably there to this day!

His close relationship with his wife Laurie is well known. Though I was not among them, some in his classes (and probably to his complete knowledge and chortle) mimicked the unique communication between the Radfords, a series of unintelligible monosyllabic mumbles not decipherable to us, but apparently, completely understood by both of them.

My Most Vivid Memories of Dr. Radford, by John Taggart

(John studied under the direction of Radford from 1981 to 1990, earning a Ph.D. He was the Coastal Plain Biologist for the North Carolina Department of Environment and Natural Resources, Division of Parks and Recreation until becoming an Assistant Professor of Environmental Studies at the University of North Carolina at Wilmington in mid-August 2006.)

My most vivid memories of Dr. Radford are from the field where I was amazed at his tenacity while traversing natural areas. My initiation was near the summit of Saddle Mountain on the Alleghany/Surry County line in 1978 when I

was working for State Parks as a biologist and Dr. Radford was a member of our Natural Areas Advisory Committee. I was 30 years old and assumed that I could easily keep up with him. While following through a dense boulder field, however, I eventually found myself dangling from a red maple sapling while watching his pith helmet rapidly disappear in the distance. Vegetation teams during Ecosystematics classes frequently witnessed his ability to quickly assign their first quarter-point sampling location as he marched along a beeline route only to have him return after navigating a semi-circle around the community type in what seemed like only 15-20 minutes. Aquatic field trips included numerous episodes such as each member of the class jumping, in sequence, off a dock at Fort Landing (Tyrrell Co.) to look for estuarine species. The early morning springtime crossing of Panther Creek's (GA) frigid waters was truly a "botanical baptism."

Albert E. Radford made landmark contributions to botany as a teacher and his influence reached throughout different levels of society. He inspired his students in the pursuit of careers in botany, biology, and conservation. His standards were typified by scholarly excellence, hard work, and dedication. An anonymous admirer, who commented on Radford, probably echoed the thoughts of numerous others (Murphy, 1978):

Many students have found in him a personal confidant with the greatest of integrity, empathy, strength, and conviction. He [was] constantly available to his students . . . despite his many projects and duties. He [was] truly a scholar and one who ha[d] dedicated his life to his students, discipline, institution, and region.

William R. Burk
John N. Couch Biology Library
University of North Carolina
CB#3280 Coker Hall
Chapel Hill NC 27599-3280
Email: billburk@email.unc.edu

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REFERENCES CITED

- Burk, W.R., R.T. Rogers and B. Appleton. 2006. A Bibliography of the publications of Albert E. Radford. <<http://www.lib.unc.edu/biology/radford.html>> (accessed 10 July 2006).
- Burk, W.R. and A.S. Weakley. 2006. Albert E. Radford—A tribute. *Castanea*. (In Press).
- Harvill, R.R., with W.E. Harvill, Jr. 1995. *Radford Ramblings; A family history of the descendants of William and Mary Milton Radford (including some of the families which connect by marriage)*. Ruth Radford Harvill, Cartersville, GA.
- Murphy, G.G. 1978. Radford recipient of 1978 Meritorious Teaching Award. *ASB Bulletin* 25: 115-116.
- Radford, A.E. 1948. The vascular flora of the olivine deposits of North Carolina and Georgia. Ph.D. Thesis, Department of Botany, University of North Carolina, Chapel Hill.
- Radford, A.E. 1950. Botany 41: Laboratory directions. [The Author, Chapel Hill, N.C.].
- Radford, A.E. 1954. Laboratory directions for Botany 41. University Book Exchange, Chapel Hill, N.C.
- Radford, A.E., H.E. Ahles and C .R. Bell. 1968. *Manual of the vascular flora of the Carolinas*. University of North Carolina Press, Chapel Hill.
- Radford, A.E. and C.R. Bell. 1961. *Laboratory directions and exercises for General Botany*. Drawings by Peggy-Ann Kessler. Edwards Brothers, Ann Arbor, Michigan.
- UNC-H. 2006. Collectors of the UNC Herbarium, Albert E. Radford (25 January 1918 – 12 April 2006). <<http://www.herbarium.unc.edu/Collectors/radford.htm>> (accessed 2 August 2006).
- Vinson, L. 2006. Email to William R. Burk, 2 July 2006.
- Weakley, A. 2006. A legacy to remember: Al Radford. *North Carolina Botanical Garden Newsletter* 34(4): 11.
- White, P. 2006. In memory of Al Radford. *North Carolina Botanical Garden Newsletter* 34(4): 2.

Table 1. University of North Carolina Graduate Students of Albert E. Radford

DOCTORAL STUDENTS

1958 (date of graduation 1959)
Ramseur, George Shuford The vascular flora of high mountain communities of the southern Appalachians.

1959 (date of graduation 1960)
Duke, James Alan. The psammophytes of the Carolina fall-line sandhills.

1961
Burk, Carl John. A floristic study of the Outer Banks of North Carolina.
Horton, James Heathman. A monograph of *Delopyrum* Small, *Dentoceras* Small, *Polygonella* Michx., and *Thysanella* Gray (Polygonaceae).

1962 (date of graduation 1963)
Gupton, Oscar Wilmont. An analysis of the taxonomic criteria as applied to the genus *Monotropa*.

1963 (date of graduation 1964)
Beard, Luther Stanford. A taxonomic study of *Mimosa quadrivalvis* L. (*Schrankia* Willd. nom. cons.).

1966 (date of graduation 1967)
Morgan, JudyTate. A taxonomic study of the genus *Boltonia* (Asteraceae). (C.Ritchie Bell and Clark J. Umphlett, co-advisors).

1967
Britt, Robert Franklin. A revision of the genus *Hypoxis* in the United States and Canada.

1968 (date of graduation 1969)
Baird, James Rex. A taxonomic revision of the plant family Myricaceae of North America, north of Mexico.

1969
Clark, Ross Carlton. A distributional study of the woody plants of Alabama.
James, Frederick Charles. The woody flora of Virginia.

1970
Culwell, Donald Edward. A taxonomic study of the section *Hypericum* in the eastern United States.

1971
Bozeman, John Russell. A sociological and geographic study of the sand ridge vegetation in the coastal plain of Georgia.

1981
Whetstone, Raymond David. Vascular flora and vegetation of the Cumberland Plateau of Alabama: including a computer-assisted spectral analysis and interpretive synthesis of the origin, migration, and evolution of the flora.

1984
Huck, Robin Bovard. Systematics and evolution of *Dicerandra* (Labiateae).

1987
Gibson, Joan Reynolds. The relationship of vegetation to diabase dikes and sills of the Gettysburg Basin, Pennsylvania.

1988

- McLeod, Donald Evans. Vegetation patterns, floristics and environmental relationships in the Black and Craggy Mountains of North Carolina.
- 1990
Taggart, John Bryant. Inventory, classification, and preservation of coastal plain savannas in the Carolinas.
- 1993
Risk, Patricia Louise Weigant. High elevation heath communities in the Blue Ridge of North Carolina.
- 1998
Nifong, Timothy David. An ecosystematic analysis of Carolina Bays in the coastal plain of the Carolinas. (Robert K. Peet, co-advisor).

MASTER OF ARTS STUDENTS

- 1954 (date of graduation 1955)
Duke, James Alan. Distribution and speciation of the genus *Ludwigia* in North Carolina.
- 1956
Houck, Duane Francis. Flood plain flora of the Deep River Triassic Basin.
Kessler, Peggy-Ann. A floristic study of the Triassic sediments, Deep River Coal Field, North Carolina.
- 1957
Laing, Henrietta. A spring and fall flora of Harnett County, North Carolina.
- 1957 (date of graduation 1958)
Horton, James Heathman. A vascular flora of Rowan County, North Carolina.
- 1958 (dates of graduation 1959)
Beard, Luther Stanford. A floristic study along the Lower Deep River of North Carolina.
Stewart, Shelton Eugene. Early spring and summer vascular flora of Lee County, North Carolina.
- 1959
Burk, Carl John. A floristic study of a sandhill area on the North Carolina coastal plain.
- 1960
Britt, Robert Franklin. The vascular flora of Robeson County, North Carolina.
Gupton, Oscar Wilmont. A vascular flora of the North Carolina sandhills wildlife management area.
- 1960 (date of graduation 1961)
McNeely, Jean Alexander. A floristic study of the Lake Norman area in Iredell and Catawba counties.
- 1962
Morgan, Judy Tate. A vascular flora of Morrow Mountain State Park, Stanly County, North Carolina.
- 1964
Bostick, Peter Edward. A geobotanical investigation of Chandler Mountain, St. Clair County, Alabama.
- 1964 (date of graduation 1965)
Bozeman, John Russell. Floristic and edaphic studies of the Altamaha River sand ridge, Georgia.
- 1965

Dayton, Bruce Roy. A study of the vegetation of Iredell clay loam.
Miller, Gary Lee. The vegetation of the serpentine barrens in southern Lancaster County, Pennsylvania.

1966
Clark, Ross Carlton. The vascular flora of the Fiery Gizzard gorges in south-central Tennessee.

1966 (date of graduation 1967)
Sears, Michael Novy. A floristic study of the limestone along Island Creek in Jones County, North Carolina.

1967
Tucker, Gary Edward. The vascular flora of Bluff Mountain, Ashe County, North Carolina.

1968 (date of graduation, 1969)
Sawyer, George Perry, Jr. The vascular flora of William B. Umstead State Park, Wake County, North Carolina.

1969
Gibson, Joan Reynolds. The flora of Alder Run Bog, Tucker County, West Virginia.
Michael, Jerry Lee. The vascular flora of Bullhead Mountain, Alleghany County, North Carolina.

1969 (date of graduation 1970)
Seaman, William Daniel. A study of the vascular flora of Mecklenburg County, Virginia.

1970 (date of graduation 1971)
Wells, Elizabeth Fortson. A vascular flora of the Uwharrie Wildlife Management Area, Montgomery County, North Carolina.

1975
Sobel, Kathy Cochoran. Systematics of three species of *Ranunculus* (Ranunculaceae).

1977
Marshall, Melissa Page. A vascular flora of Bennington County, Vermont.

1977 (date of graduation, 1978)
Wilson, Elizabeth Jean. A floristic study of the "savannahs" on pine plantations in the Croatan National Forest.

1979
Huck, Robin Bovard. Flora, vegetation and soils of the Bull Creek Watershed, Osceola County, Florida.

MASTER OF SCIENCE STUDENTS

1970
Bond, Harold Alonzo. An ecological study of *Coelomomyces* in the Piedmont area of North Carolina.

1973
Leonard, Steven Worth. Not required to submit a thesis.

1974
Bryant, William Thomas. Not required to submit a thesis.
Martin, David Lance. Not required to submit a thesis.

1975
Boufford, David Edward. Not required to submit a thesis.

Schram, Lynn Alan. Not required to submit a thesis.

Wood, Emily Walker. Not required to submit a thesis.

1978

Thorburn, Patricia Lois Cooley. [project title]: A vegetational analysis of the Cronn tract, Eastford, Connecticut.

1979

Rohrer, Joseph Raphael. [project title]: The flora and vegetation of the Hanging Rock area, Avery and Watauga counties, N.C.

1980

Morgan, Sharon Webb. [project title]: Species general information system: Species, population, habitat, and threat inventory; and species status summary for *Geum radiatum* Michaux.

Sheftall, William Lowe, Jr. [project title]: A natural resources inventory of the research natural area Hitchiti Experimental Forest in Jones County, Georgia, Southeastern Forest Experiment Station, United States Forest Service.

1982

Sather, James Dawson. [project title]: An ecosystematic analysis of selected areas of the Hot Springs Valley, Madison County, North Carolina.

1985

Tingley, Carol Ann. An ecosystematic survey of floodplain vegetation at the mouth of the Roanoke River.



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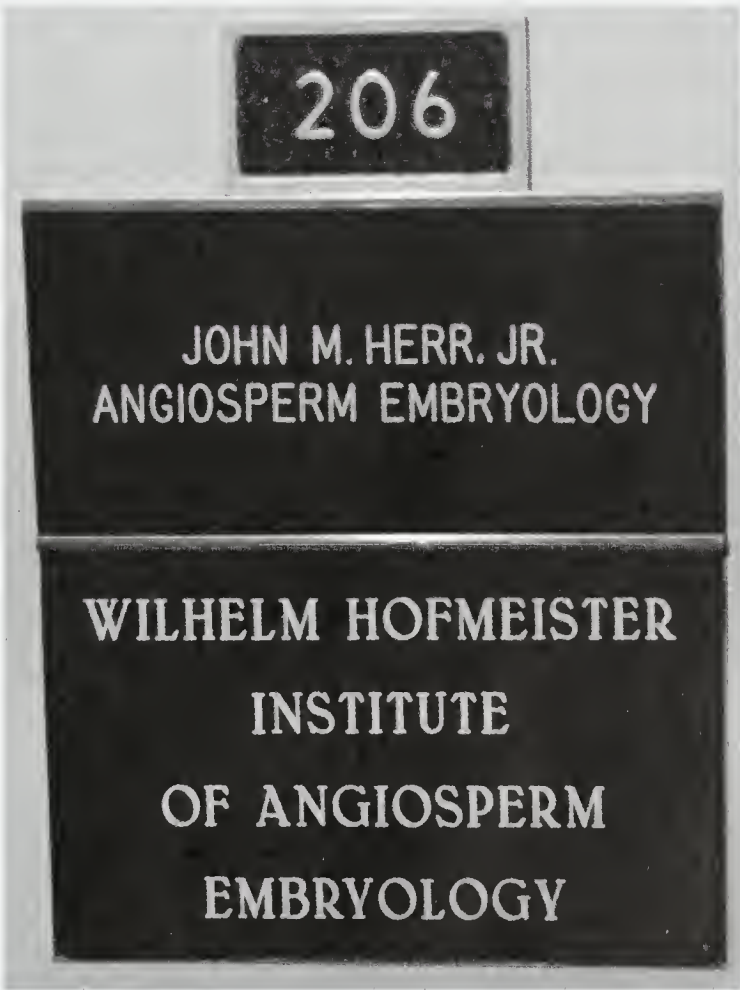
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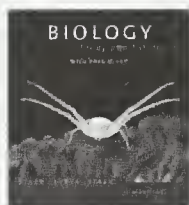
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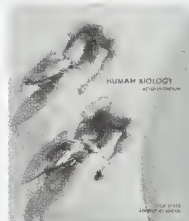
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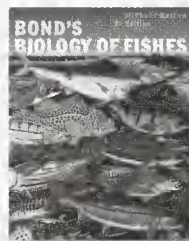


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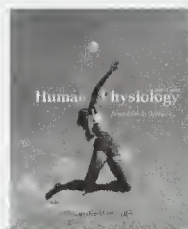
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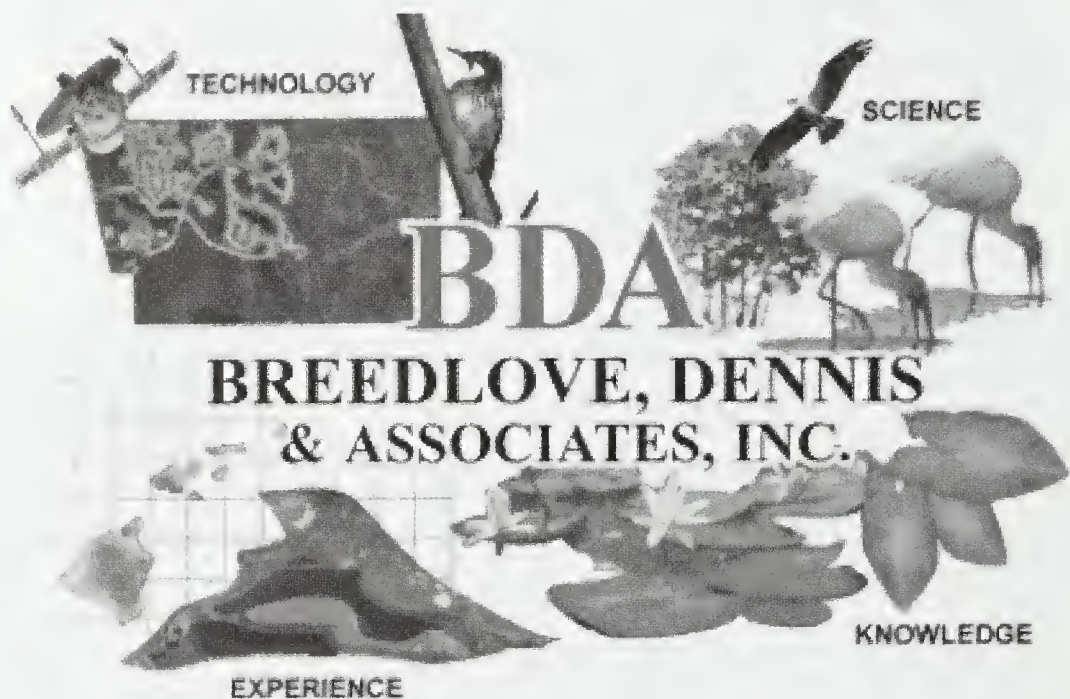
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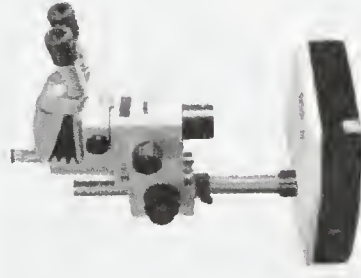


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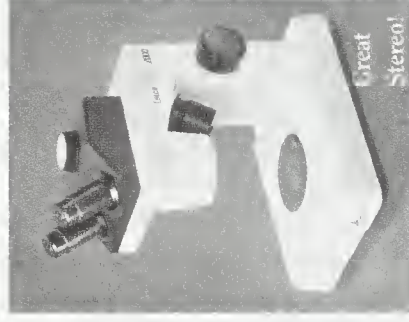
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